ANALYSIS OF FUNCTIONAL ASSESSMENT INSTRUMENTS FOR DISABILITY/REHABILITATION PROGRAMS

SSA Contract No. 600-95-21914

SUMMARY REPORT

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Section I: Introduction

Purpose of the Current Project

In order to further the redesign of the disability determination process, the Social Security Administration (SSA) contracted with the Department of Physical Medicine and Rehabilitation (DPM&R) at the Medical College of Virginia, a teaching hospital which is part of Virginia Commonwealth University, to review functional assessment literature and methods.

DPM&R's specific task was to thoroughly research the literature about assessment systems, methods, and instruments for associating clinical measures with measures of functional ability and capacity to perform activities and tasks, and develop a systematic method of describing, categorizing, comparing, and evaluating them for the purpose of determining their potential application in the disability insurance program. This information is designed to be the basis for further research in selecting and developing systems, methods, and instruments of functional assessment for task and occupational requirements to support determinations whether any given person is or is not disabled under the Social Security Act. This information also may be useful in providing appropriate employment and rehabilitation services for disability applicants and beneficiaries.

This important work holds significant implications for SSA and its constituencies. In recent years, beneficiary rolls for Supplemental Security Income (SSI) and Disability Insurance (DI) have expanded rapidly. All evidence suggests that once deemed eligible for benefits, beneficiaries do not re-enter the labor market to any significant degree. Changes in the evidentiary process and requirements to determine disability will inevitably lead to gradual shifts in both the number and the characteristics of applicants and eligible beneficiaries. Of greater importance, this work holds promise for increasing the numbers of applicants and beneficiaries who can and should be able to resume employment unassisted or through rehabilitation efforts.

Background

The SSA's plan for a new disability claim process is part of its attempt to restore public confidence in its programs while providing service to its customers. The five primary objectives of the redesigned process are:

- Making the process "user friendly" for claimants and those who assist them;
- Making the right decision the first time;
- Making the decision as quickly as possible;
- Making the process efficient; and
- Making the work satisfying for employees.

The impetus for redesigning the disability determination process comes from recent trends within the population of claimants. First, there has been unprecedented workload increase in SSDI and SSI concurrent with significant downsizing in SSA and staffing fluctuations in state disability determination systems. For example, the number of SSI and DI claims for FY 1995 (approximately 2.9 million) will be an estimated 69% increase over FY 1990 levels, and there will be an estimated 75% increase in requests for administrative law judge hearings.

Second, the demographic characteristics of the SSA disability claimant population have changed dramatically in recent years due to (1) increased filings based on mental impairments, including mental illness and substance abuse; (2) eligibility of disabled children for SSI due to the 1990 U.S. Supreme Court decision (Sullivan v. Zebley) which resulted in an increase from 11% of total claims in 1988 to 21% of total claims in 1992; and (3) for one of every seven people making claims English is not the native language, an increase of 38% in that past 10 years.

The following factors have led to different interpretations of the same evidence by different adjudicators:

- Varying approaches to assessing a claimant's functional ability that are required at different steps in the sequential evaluation;
- The varying nature and types of evidence that adjudicators may rely on to assess function; and
- The vocational rules originally designed to provide a structured approach to decision making have grown more and more complex and lead to inconsistent decisions.

Clearly, changes are needed in the disability determination process to insure consistency and equity across adjudicators, regions, and claimant populations.

Standardizing and Improving the Disability Determination Process

Under the new disability determination process, claimants will be offered a range of options for filing a claim and use various modes of technology to interact with SSA. Claimants have the right to a personal interview with the decision makers. "A correct disability decision is one that appropriately considers whether an individual does or does not meet the factors of entitlement for disability as defined by SSA."

- Correct decisions in new process will depend on a common frame of reference for deciding disability at all levels of the process;
- Consistent training of all adjudicators;
- Enhanced and targeted collection and development of medical evidence; and
- Automated claim processing system to assist in evidence gathering, analysis and decision making.

The new disability determination methodology will be designed to promote consistent,

equitable, and timely decisions. This methodology will be a four-step process:

1. Is the individual engaging in substantial gainful activity?

2. Does the individual have a medically determinable physical or mental impairment still required anatomical, physiological, or psychological abnormalities demonstrable by medically acceptable clinical and lab diagnostic techniques but the threshold inquiry will include combination of impairments?

3. Does the individual have an impairment included in the Index of Disabling Impairments, i.e., an impairment that clearly restricts functional ability to a degree that the individual is unable to engage in substantial gainful activity without measuring the individual's functional ability? This Index of Disabling Impairments describes impairments that are considered extremely severe to the extent that inability to engage in work can be presumed and is expected to apply to a relatively small number of claims. The medical findings in this index will be nontechnical and exclude things such as standardized requirements for specific tests or even tests results such as pulmonary function, EKG's. If the answer here is no, the determination specialist will proceed to step 4.

4. Does the individual have the ability to engage in any substantial gainful activity?

This report summarizes the work of the Medical College of Virginia's Department of Physical Medicine and Rehabilitation to assist SSA by conducting a review of functional assessment instruments, methods, and procedures in current use. Section 2 describes the search for known instruments; Section 3 describes the classification schema for reviewing those instruments; Section 4 describes how the identified instruments were screened to determine those that best met the needs of SSA's redesign process and claimants; in Section 5, instruments identified as most appropriate are reviewed in detail; lastly, Section 6 summarizes the findings of the review and implications for SSA.

Section 2: Search of Literature and Other Resources

The Project Work Group

The project work group included project staff and selected consultants with expertise with functional capacity assessment in the public and private sectors. These consultants included the following individuals:

- Pat Owens, Vice President of Disability Programs for UNUM Life Insurance Company, one of the largest private disability insurers in the nation;
- Mary Morrissette, RN, BSN, CCM, Regional Business Development Director of HealthSouth Corporation;
- Sung Choi, PhD, Professor of Biostatistics and Neurosurgery at the Medical College of Virginia;
- Karen Drilling, PT, registered physical therapist with the Medical College of Virginia;
- Anne G. Fisher, ScD, OTR, FAOTA Professor, Department of Occupational Therapy at Colorado State University; and
- Mohammed I. Ranavaya, MD, whose background includes occupational and environmental medicine, cardiology, family and community practice, and surgery.

A series of teleconferences with the consultants was completed from September to December 1995. In preparation for the teleconference, all project staff and consultants received copies of (1) the Project Management Plan, and (2) a list of questions that would be addressed during the teleconference, such as databases, organizations, or other resources which were not included in the Project Management Plan but which should be contacted as part of this phase of the project. The project consultants identified a number of professional organizations, individuals, business and government groups, newsletters and other publications, Internet sites, and other resources, as well as key issues to guide the search and classification process.

The Search Process

On-line data bases (Medline, PsychLit, Education Resources Information Clearinghouse [ERIC], HaPI-CD health and psychosocial instruments database, nursing sciences databases, and the VCU/MCV library system's on-line card catalog) were searched using key word descriptors. This was a time-consuming process due to the necessity for long periods of mainframe computer access time, cross-matching terms, and reviewing abstracts of "hits" for appropriateness for further review.

In addition, project staff identified many pertinent USENET and BITNET bulletin boards and discussion groups in medical, rehabilitation, psychological, and research discussion groups. Exhibit 1 provides a listing of postings completed to date and those on which information requests will be posted. The World Wide Web (WWW) was searched using browser software and similar descriptors as with the on-line database searches, with a listing provided in Exhibit 2.

In addition to our own searches on the WWW, information regarding the project was added to the MCV DPM&R Web page. Individuals browsing the Web using appropriate key words (i.e., functional assessment, work capacity assessment, disability determination, etc.) were directed to information on the project and were able to complete a survey form directly on the Web page regarding innovative approaches
they were using or new instruments or systems under development.

In response to suggestions by the Project's consultants, staff also made a number of national and international contacts with individuals in government, professional groups, private sector disability insurance and health care providers, and university-affiliated research programs. These individuals and organizations were contacted by phone, fax, or e-mail. A listing of these contacts is provided in Exhibit 3.

As can be seen from a review of the exhibits, the project expended enormous amounts of man-hours searching for functional assessment instruments. The number of identified scales, subscales, revised scales, and assessment batteries (approximately 700) is staggering. A significant amount of time and energy were expended to provide an extensive and, at this point, exhaustive search of the available literature, private corporations, governmental agencies, and other resources.

Exhibit 1
USENET and BITNET Groups on Which Information Requests Were Posted

Name of Group	Purpose of Group
alt.med.cfs	Bulletin board and forum for persons with chronic fatigue syndrome (CFS) and researchers and other medical professionals working with CFS patients
alt.med.equipment	Bulletin board for medical equipment suppliers and customers
alt.med.outpat.clinic	Bulletin board and forum related to outpatient clinic services and providers
alt.med.phys-assts	Forum and bulletin board for Physician Assistants
alt.society.mental-health	Forum and bulletin board for persons with various types of mental illness, and for physicians, psychiatrists, psychologists, families, and other individuals working with individuals with mental illness
alt.med.fibromyalgia	Forum and bulletin board for persons with fibromyalgia, physicians, and other interested individuals
alt.support.anxiety	Support group for persons with anxiety disorders and interested medical or rehabilitation professionals
alt.support.arthritis	Support group for persons with arthritis and interested medical or rehabilitation professionals
alt.support.asthma	Support group for persons with asthma and interested medical or rehabilitation professionals

Name of Group	Purpose of Group
alt.support.cancer	Support group for persons with cancer and interested medical or rehabilitation professionals
alt.support.depression	Support group for persons with depression and interested medical or rehabilitation professionals
alt.support.headaches.migraine	Support group for persons with migraine headaches and interested medical or rehabilitation professionals
alt.support.mult-sclerosis	Support group for persons with multiple sclerosis and interested medical or rehabilitation professionals
alt.support.tourette	Support group for persons with Tourette syndrome and interested medical or rehabilitation professionals
bionet.molbio.evolution	Newsgroup that discusses topics of interest in molecular biology
bit.listserv.blindnews	Forum and bulletin board for persons with visual impairments, and for professionals who work with individuals with visual impairments
bit.listserv.c+health	Forum and bulletin board related to health issues
bit.listserv.medforum	Forum and bulletin board for healthcare professionals, particularly physicians
bit.listserv.medlib-l	Forum and bulletin board for a diverse group of healthcare professionals in research and clinical practice, including medical librarians requesting information regarding new treatments and methods
bit.listserv.mednews	Bulletin board for recent information on medical treatments and rehabilitation

Name of Group	Purpose of Group
bit.listserv.tbi-support	Support group for persons with brain injuries and interested medical or rehabilitation professionals
k12.ed.health-pe	Bulletin board and forum for physical education professionals for grades K - 12
listserv.bi-l	Bulletin board for biological science librarians, discussion of issues in biological science
misc.education.medical	Bulletin board and forum for teaching physicians, medical school personnel, and medical students
misc.handicap	Bulletin board and forum for individuals with handicaps, medical and rehabilitation professionals, and family members
misc.health.alternative	Bulletin board and forum for physicians and patients in the area of alternatives to allopathic medicine
misc.health.arthritis	Bulletin board and forum for individuals with arthritis, researchers, and medical and rehabilitation professionals interested in arthritis patients and treatments
misc.health.diabetes	Bulletin board and forum for individuals with diabetes, researchers, and medical and rehabilitation professionals interested in diabetes patients and treatments
misc.health.injuries.rsi.misc	Bulletin board and forum related to sports injuries
misc.health.therapy.occupational	Bulletin board and forum for occupational therapists
misc.kids.health	Bulletin board and forum for pediatricians, researchers, and parents related to childhood injuries and illnesses

Name of Group	Purpose of Group
rec.fitness	Forum on a broad range of physical fitness issues and methods
sci.med	Forum and bulletin board on a broad range of medical topics and issues
sci.med.aids	Bulletin board and forum for persons infected with the AIDS virus, and researchers and other medical professionals involved with AIDS patients
sci.med.occupational	Forum and bulletin board for medical professionals in the field of occupational medicine
sci.med.orthopedics	Forum and bulletin board for medical and rehabilitation professionals in orthopedic medicine
sci.psychology.announce	News and announcements of events focused toward the field of psychology
sci.psychology.consciousness	Forum and bulletin board focusing on brain functioning and consciousness
sci.psychology.misc	Open forum on all topics within the field of psychology
sci.psychology.personality	Forum and bulletin board for individuals with personality disorders, and medical and rehabilitation professionals in the field of personality disorders
sci.psychology.psychotherapy	Forum and bulletin board for Psychiatrists and other medical personnel in the field of psychotherapy
sci.psychology.research	Newsgroup for researchers in psychology, including new research methods, sampling, etc.
sci.psychology.theory	Newsgroup for psychological theory

Exhibit 2
World Wide Web Sites Searched

WWW Site	Owner	Description
http://hiru.mcmaster.ca/prevent/pvcpg_00.htm	Preventive Care Guidelines, 1991 Johns Hopkins University	Home Page from the Health Information Research Unit of the Johns Hopkins University Medical Center.
http://wwwmed.stanford.edu/MedSchool/DGIM/Teaching/Modules	Stanford University School of Medicine	Primary Care Teaching Modules for the school of Medicine of Stanford University, CA.
http://www.nlm.nih.gov	The United States National Library of Medicine and National Institutes of Health	Home Page for the National Library of Medicine and National Institutes of Health.
http://www2.infoseek.com/doc/netdir/health.html	Bank of America	Source of sites sponsored by Bank of America that are experts in their respective specialties.
http://www.teleport.com/~informed	Informedics, Inc.	Home page for Informedics, Inc., and all of its respective divisions, to include its own healthcare newsgroups.
http://www.geopages.com/tokyo/1742/ime1.html	AccessAbility	Home Page for AccessAbility, a company based in Austin, Texas that specializes in medical disability assessment systems.
http://www.social.com/health/index.html	The Good Health Web	Privately organized newsgroup that discusses many different mainstream health issues.
http://www.medicom.com/medicom/rome.html	Internet Medical Products Guide	Review of medical products available over the Internet

WWW Site	Owner	Description
http://www.edoc.com/apta/	The American Physical Therapy Association	Home Page for the American Physical Therapy Association. Includes different pages on trends in the industry, as well as other professional developments within the field of Physical Therapy.
http://CUTL.city.UniSA.edu.au:80/pt/	The Physiotherapy World Wide Web Server	Physiotherapy Home Page located at the University of South Australia in Adelaide, Australia that serves as the electronic link for students and professionals in Physiotherapy throughout the world.

Exhibit 3
National and International Contacts

I. Individual Contacts

Jan Harrison, MSc,SROT, Occupational Therapist, United Kingdom
Dr. Mansel Aylwar, College of Occupational Therapists, United Kingdom
Richard Wickstrom, M.D., Disability Control Incorporated
Mike Graham, NovaCare
Élisabeth Dutil, MSc, University of Montreal, Canada
Chuck Jones, Workman's Compensation Insurance Group
Dr. Debbie Day, Chief Medical Officer, Workman's Compensation Insurance Group
Suzanne Mercure, Southern California Edison
Mike Niss, Worker's Compensation Research Institute
Dr. Mark Batista, UNUM Insurance Co.
Kathy Kirchner, Washington Business Group on Health
Dr. Keith Enelow
Richard Miller, HIAA Social Security Reengineering Subcommittee
Dr. Robert Hall, National Association of Rehabilitation Professionals
Dr. Elliott Skorupa, HealthSouth Insurance Co.
Dr. Robert Osborne, HealthSouth Insurance Co.
Dave Hubbard, BC/BS of Texas
Jill Gooder, New Zealand
Su Robinson, United Kingdom
Birgitta Bernspång, Sweden
Ellie Fossey, Australia
José Hensgens, Holland
Eva Wæhrens, Denmark
Tal Jarus, Israel
Jerry Thomas, National Association of Disability Determination Directors

II. Organizational Contacts

American Board of Disability Analysts
National Association of Disability Evaluation Professionals
National Institutes of Health
National Institute of Disability and Rehabilitation Research
American Academy of Physical Medicine and Rehabilitation
American Pain Society
American Rehabilitation Association
American Physical Therapy Association
American Congress of Physical Medicine
American Academy of Pain Medicine
American Academy of Disability Evaluating Physicians
National Association of Rehabilitation Facilities

Exhibit 3, cont.

Commission on Accreditation of Rehabilitation Facilities
Physiatric Association for Sports and Occupational Rehabilitation
National Association of Disability Examiners
National Council of Social Security Management Associations
American Association of Occupational Health Nurses

Section 3: Screening of Functional Assessment Instruments

Based on the literature review and input from the Project consultants, a preliminary classification matrix was developed. This preliminary classification schema was presented to the Project Work Group and to SSA and modifications made. The following section describes the final classification schema that was used in the screening process; an overview of the classification schema is included as Exhibit 4.

Functional Referent/Unit of Analysis - Each instrument was initially classified by its unit of measurement or functional referent. For example, does the instrument focus on primary physical, psychological, or cognitive processes, biological function, physical
capabilities, mental capabilities, activities of daily living, general work behaviors, communication and language abilities, postural limitations, and vocational tasks associated with specific duties or tasks? The Functional Referent/Unit of Analysis categories are included in Exhibit 4. Within each of the first five major headings will be subheadings for global measures (i.e., global measures of health status) and measures of specific functions (i.e., respiratory function) within the major grouping.

Instrument Purpose - Each instrument was reviewed to determine its applicability to various sub-populations. Is the instrument applicable to individuals with all types of disabilities, or only a single disability. The primary classification is general or specific.
The use of original intent as the criterion for this classification is to differentiate this component from generalizability. While some instruments have been developed for and validated with specific groups, there may be evidence within the research literature indicating that the instrument may have practical implications for individuals with other types of disabilities.

Information Source - Each instrument or battery was reviewed to determine the sources of information used to make decisions and predictions based on applicant performance. either self-report, physician, other, direct measure, or undetermined. For instruments that rely on self-report, instruments that are self-administered by the patient (as in a pencil-and-paper test of cognitive ability) will be differentiated from those for which the patient provides information to a physician or other individual who completes the assessment. To be coded as physician or other, an instrument must rely on observation of the patient by the individual who completes the assessment. A direct measure, as in the preliminary schema, pertains to methods that use mechanical measures, such as grip strength, heart rate, and the like.

Reliability - The presence or absence of instrument reliability analyses was assessed. The types of reliability that were searched were inter-rater, test-retest, and index reliability. Instrument reliability was coded as either found or not found. The three types of reliability were not assessed independently, but the presence or absence of any reliability analysis.

Validity - As with reliability, the presence or absence of instrument validity was

assessed. The three types of validity that were searched included concurrent, construct, and content validity. The coding system was identical for that used to assess reliability, either found or not found.

Feasibility - The presence or absence of six types of feasibility were assessed. Availability, safety, invasiveness, ease of administration, and cost information were retained from the preliminary classification schema. An additional component, approximate time required to complete the assessment, was added. Each of the above fields was rated as high, medium, low, or undetermined, based on representative research

Generalizability - The presence or absence of three types of generalizability were assessed: Whether or not the functional assessment is adaptable to other languages, whether the instrument can be generalized to other disabilities than for which it was intended, and how easily convertible the functional assessment is to computer applications. The coding system was identical to that used for the feasibility assessment.

The results of this screening process, the database of functional assessment instruments, methods, and protocols, is appended.

Exhibit 4
Overview of the Preliminary Classification Schema

1. Functional Referent/Unit of Analysis
2. Instrument Purpose
3. Information Source
4. Reliability, including:
   - Inter-rater Reliability
   - Test-retest Reliability
   - Index Reliability
5. Validity, including:
   - Concurrent Validity
   - Construct Validity
   - Content Validity
6. Feasibility
   - 6(A) Availability
   - 6(B) Safety
   - 6(C) Invasiveness
   - 6(D) Ease of Administration
   - 6(E) Cost
7. Generalizability
   - 7(A) Language
   - 7(B) Disability
   - 7(C) Computer

Section 4: Selection of Functional Assessments for Further Review

Selection Criteria

Project staff sought to select a smaller number of instruments which were most appropriate to SSA's needs. Based on input from SSA in the form of teleconferences and fax communication, the following decision rules were developed by VCU and implemented:

1. Two criteria were used for automatic exclusion of an instrument from further review: (a) The literature search returned no citations of research, and (b) no evidence of reliability or validity of an instrument was found.

2. For inclusion into the group of instruments selected for further review, an instrument had to have the following characteristics: (a) The instrument must have generalizabilty to the SSA claimant population, that is, working age adults; (b) the instrument must be widely available; (c) there would be a preference for global measures of status as opposed to specific measures, provided that global measures could be found that could be applied to all types of disabilities within the broad classification schema (i.e., physical, cognitive, non-cognitive mental, etc.); (d) instruments or methods would have low invasiveness, defined as the extent to which the requires bodily intrusions, psychological probing, or sensitive or extensive questioning; and (e) there would also be a preference for instruments that did not require administration by a physician, psychiatrist, or other highly trained specialist. Instruments were included that could be administered by physical therapists, counselors, etc., with or without some initial training period.

The findings from the initial screening provided ample documentation to complete the selection process. The above criteria were applied to the screening data by the project staff for selection.

Instruments Selected for Further Review

The criteria initially yielded 46 instruments which met the selection criteria. During the secondary review, five instruments were deleted from the list based on new information:

The **Rankin Scale** is a one-item, six-point scale for assessing the severity of an impairment. While the Rankin Scale has high reliability and generalizability, staff determined that it would not be appropriate for use in the disability determination process because it is used to rank disability, not to screen for or determine disability.

The items on the **Communications Abilities in Daily Living (CADL)**were believed

to be too narrow in scope to adequately meet SSA's purpose of disability determination. Communication impairment would not in and of itself constitute a disability; conditions that might cause communication impairment (i.e., cognitive, physical or neurological impairment) would.

The **Severe Impairment Battery** is comprised of instruments either selected for further review or screened out of the review process, and its inclusion was therefore redundant.

The **Functional Status Index (FSI)** and the **Functional Activities Questionnaire (FSQ)** were developed to assess members of the geriatric population. A further search of the research literature uncovered no studies which utilized the FSI or the FSQ with populations matching SSA's claimant pool.

Also, based on new information received by project staff during the search process, five new instruments were added to the list of selected instruments:

The **General Health Questionnaire (GHQ),** a global measure of mental health status;

Applied Rehabilitation Concepts (ARCON), a computer-assisted method of global physical functional capacity testing;

AssessAbility, a computer-assisted assessment of physical capacity to engage in specific jobs;

The **ERGOS Work Simulator**, also a computer-assisted method of assessing physical capacity to perform work tasks; and

The **Physical Work Performance Evaluation (PWPE),** an assessment of physical capacity to perform specific work tasks.

The complete list of instruments and methods selected for further review is presented in Exhibit 5.

Content of the Secondary Review

For the secondary review, all available literature on a particular instrument or method was reviewed as well as specific items included. In conducting the secondary reviews of selected instruments, project staff sought to add further detail to the instruments that would benefit SSA in its further research. The types of issues addressed in the secondary review include:

1. Primary Purpose and Description of the Instrument

What was the original intent of the instrument -- assessment of disability, assessment of activities of daily living (ADLs), specific populations (i.e., disability group, age group, rehabilitation facility patients, etc.)?
What are the characteristics of the instrument/method? Is it a checklist, performance test, etc.?
How is the assessment scored? Are subscale scores derived in addition to a total score?

2. Validation Methods and Samples

On what type of sample were original reliability and validity measures taken?
What are the specific types of reliability and validity measures reported?

3. Secondary Use

Are there other groups (disability, age, etc.) for whom the instrument has been used and/or validated and for what purpose?
Are there other purposes for which the instrument has been utilized?

4. Measurement of Occupational Performance

Does the instrument or method have a direct occupational performance measure, such as specific items related to employability or observation of task performance?
Are there research studies that correlate instrument scores or ratings with occupational performance, employability or return to work?

5. Additional Findings

Are there verification of effort procedures?
Has the instrument been adapted to computerized use?
Has the instrument been translated to other languages?
What is the degree of intrusiveness or the amount of exertion required of applicants?
What are the cost considerations?
Are there other findings that SSA should consider in selecting functional capacity assessments for further research?

In addition, information is provided on the availability of the instrument where known.

Exhibit 5
Instruments Selected for Further Review

Applied Rehablilitation Concepts (ARCON)
AssessAbility
Ball Neuropsychological Screening Measure (BNSM)
Barthel Index - Modified (MBI)
Beck Depression Inventory (BDI)
Brain Injury Rehabilitation Scale (BIRS)
Brief Disability Questionnaire (BDQ)
Brief Psychiatric Rating Scale (BPRS)
Brief Symptom Inventory (BSI)
Category Test (HCT)
Cognitive Capacity Screening Examination (CCSE)
Craig Handicap Assessment and Reporting Technique (CHART)
Disability Rating Form (DRF)
Disability Rating Index (DRI)
Disability Rating Scale (DRS)
Duke Health Profile (DUKE)
Edinburgh Rehabilitation Status Scale (ERSS)
ERGOS Work Simulator
Framingham Functional Assessment Scale (FFAS)
Functional Assessment Inventory (FAI)
Functional Autonomy Measurement System (SMAF)
Functional Independence Measure (FIM)
Functional Status Questionnaire (FSQ)
General Health Questionnaire (GHQ)
Global Assessment of Functioning (GAF) Scale
Index of Independence in ADL
Index of Well-Being (IWB)
Katz Adjustment Scales (KAS)
Mini-Mental State Examination (MMS)
Multiperspective Multidimensional Pain Assessment Protocol (MMPAP)
Neurobehavioral Rating Scale (NBRS)
Neuropsychological Impairment Scale Revised (NIS)
Nottingham Health Profile (NHP)
Pain Disability Index (PDI)
Patient Evaluation Conference System (PECS)
Physical Work Performance Evaluation (PWPE)
Preliminary Diagnostic Questionnaire (PDQ)
PULSES Profile
Rapid Disability Rating Scale-2 (RDRS-2)
Rehabilitation Activities Profile (RAP)

Exhibit 5
Instruments Selected for Further Review
continued

Shipley Institute of Living Scale
Short Portable Mental Status Questionnaire (SPMSQ)
Sickness Impact Profile (SIP)
UAB Pain Behavior Rating Scale
West Haven-Yale Multidimensional Pain Inventory (WHYMPI)
Wisconsin Personality Disorders Inventory (WISPI)

Section 5: Secondary Review of Selected Instruments

In this section, we present findings from the secondary reviews of selected instruments. These are arranged alphabetically, not in order of preference or the degree to which the selection criteria were met.

Instrument/method: Applied Rehabilitation Concepts (ARCON)

Primary Purpose and Description

The ARCON system includes automated (i.e., computer-generated) functional capacity testing in the following areas: Range of motion, cervical/extremity testing, lumbar spine testing, lift capacity, hand and pinch strength, wrist and forearm testing, and electronic goniometer for joint mobility. The system includes a video analysis system for recording and capturing essential job demands, a heart rate monitor for validation of effort, a self-assessment of perceived ability to perform 50 work activities, and the ARCON Automated Impairment Rating System (AIRS) to produce a totally graphical whole person evaluation which can be modified for specific needs, including the physical capability to perform specific work tasks. The ARCON software uses Microsoft Windows format.

Validation Methods and Samples

To date, only the ARCON ROM assessment has been subjected to validation.[1] The analysis included 34 adults (mean age 22.8) who performed two separate testings of 10 movements with the ARCON ROM machine and two with dual inclinometry. These were followed by four ARCON ROM sessions, two with previously used techniques and two with improved stabilization techniques. Neither the ARCON ROM nor the dual inclinometry proved highly reliable for more than a few of the 10 tests. Values for ARCON tended to be higher than inclinometry. Improved stabilization techniques improved the reliability of the ARCON measures.

Secondary Use

In a study by Robert et al,[2] the ARCON Static Strength Testing Device was used to assess the degree of gain from a work hardening program for individuals with lower back dysfunction.

Measurement of Occupational Performance

The intent of the ARCON system is to assess physical capacity to perform specific work tasks. Predictive validity research regarding return to work or occupational performance was not found.

Additional Findings

The ARCON system requires considerable investment for testing equipment and software. A heart rate monitor provides some degree of verification of effort. The tests require moderate levels of physical exertion, such as lifting and static strength testing.

Availability

Information on the ARCON system is available from:

Applied Rehabilitation Concepts, Inc.
309 McLaws Circle, Suite F
Williamsburg, VA 23185

References

1. Hasten DL, Johnston FA, Lea RD. Validity of the Applied Rehabilitation Concepts (ARCON) system for lumbar range of motion. Spine 1995; 20:1279-1283.
2. Robert JJ, Blide RW, McWhorter K, Coursey C. The effects of a work hardening program on cardiovascular fitness and muscular strength. Spine 1995; 20:1187-1193.

Instrument/method: AssessAbility

Primary Purpose and Description

AssessAbility is a physical work capacity evaluation system and software which used Methods-Time Measurement (MTM) data to compare an evaluee's abilities against the MTM Industrial Standard (I.S.). The client's time and capability to perform the function is compared against the computer calculation of the I.S. for that function. The Microsoft Windows-based software calculates the I.S. based on the variables input; such as weight, distance, and number of motion cycles. Medical disability evaluation physicians and assessors are considered the best choice for delivering the assessment. Fundamental motions evaluated by the MTM system include the following:

Reach
Move
Turn
Apply pressure
Grasp
Position
Disengage
Release
Walk
Foot motions
Leg motions
Side step
Turn body
Bend, stoop or kneel on one knee
Kneel on both knees
Sit
Stand from sitting
Eye travel
Eye use
Crank

These motions are assessed with a series of tests using common objects, with data entered into the software by the examiner. The program manual describes in detail the procedures for completing each test and recording data.

Validation Methods and Samples

The prototype version of AssessAbility has only recently been licensed for use in the field. Formal reliability and validity analyses will be conducted when sufficient data are available. The developers note in the AssessAbility manual[1] that many studies have been performed using MTM data in empirical research and program evaluation. MTM data have been shown to have extremely high reliability and content validity, and have been accepted in the courts and arbitrations as a valid standard of work performance and fair labor standards. In this respect a work capacity evaluation based on MTM data has content, context and predictive validity.

Secondary Use

No secondary uses were identified.

Measurement of Occupational Performance

AssessAbility provides an objective assessment of an individual's physical capacity to perform the essential duties of a specific job. No secondary uses were identified.

Additional Findings

AssessAbility is intended to be licensed to industry and rehabilitation centers on a per-assessment basis. The cost per client assessment is $20.00 (U.S.) or $25.00 (Canadian), with a minimum purchase of 20. Verification of evaluee effort is assessed via empirically and theoretically based methodologies; the coefficient of variance of repeated, same measure scores; cardiovascular workload analysis; perceived exertion scale analysis. Furthermore, the MTM assessment protocol allows random sampling of client naturalistic behavior, (client motion-times performed outside of the client behavior expectancy system intrinsic to structured assessment protocols). An analysis of variance of naturalistic motion scores compared to structured test motion scores produces strong verification of effort. The AssessAbility testing regimen can be tailored to type of job, and therefore is variable; the time range to complete the assessment ranges from approximately 30 minutes to 4 hours. The testing regimen requires low to moderate levels of exertion, such as kneeling, stooping, and lifting.

Availability

The AssessAbility demonstration software and manual are available from:

Michael Copeland, M.A., A.R.W., C.C.R.C.
IME AssessAbility, Inc.
3rd Floor, 1815 Blanshard Street
Victoria, B.C., Canada, V8T 5A4

References

1. IME AssessAbility, Inc. AssessAbility Manual. Victoria, BC: Author, 1995.

Instrument/method: Ball Neuropsychological Screening Measure (BNSM)

Primary Purpose and Description

The Ball Neuropsychological Screening Measure (BNSM)[1] is designed to be a quick assessment for the determination of neurological disability. The subtests include mental status, digit memory, spacial discrimination, object naming, mental computation, finger identification, verbal abstraction, visual memory, tactual discrimination, patterns, finger tapping, written expression, reading, vocabulary, construction, and temporal memory. The screening test requires approximately 30 minutes to complete by an examiner. The BNSM can be administered by a lay examiner after a training session of approximately one hour.

Validation Methods and Samples

In original validation analyses,[2,3] the BNSM has been found to have an internal consistency Cronbach's alpha of .951. It was able to discriminate neuropsychologically impaired individuals with 96% accuracy, and to predict lateralization of brain damage (location of hemispheric damage) with 95% accuracy.

Secondary Use

The BNSM is designed as a screening instrument for neuropsychological impairment. No secondary uses were identified.

Measurement of Occupational Performance

The BNSM contains no items or subscales related to employment. No research was found which related BNSM ratings with employability or occupational performance.

Additional Findings

As a screening instrument, the BNSM compares very favorably with more time-consuming test batteries, such as the Halstead Reitan Neuropsychological Battery. The BNSM takes approximately 30 minutes to complete, as opposed to four to eight hours for the Halstead Reitan. The BNSM also requires no special credential to administer, although training is available.

Availability

The BNSM protocol and instructions are available from:

Dr. Raymond S. Dean
Ball Neuropsychological Laboratory
TC 500
Ball State University
Muncie, Indiana 47306

References

1. Dean RS, Brooks DA. The Ball Neuropsychological Screening Measure. Muncie, IN: Ball State University.
2. Brooks DA. Development of the Ball Neuropsychological Screening Measure. Dissertation Abstracts International 1989;50(5):1792-B.
3. Brooks DA, Williams RN, Raymond SD, Wood TM, Krug D. The predictive validity of a neuropsychological screening measure. Intern J Neuroscience 1990; 51:83-88.

Instrument/method: Barthel Index - Modified (MBI)

Primary Purpose and Description

The Barthel Index is generally regarded as one of the most widely used and most heavily researched of the activities of daily living (ADL) scales. The original Barthel[1] consisted of 100 Likert-scale items related to independence in feeding, wheelchair and toilet transfer, grooming, bathing, walking, dressing, bowel and bladder control, and climbing stairs. These items are rated on a continuum of independence, from complete independence to complete dependence. The original Barthel was intended for use in rehabilitation settings as a measure of functional outcome. The Modified Barthel Index (MBI)[2] shortened the index to 15 items organized into two indices, self-care and mobility. The items are rated either "Can do by self," "can do with help of someone else," and "cannot do at all."

Validation Methods and Samples

The Barthel was originally validated with patients having neuromuscular or musculoskeletal disorders receiving physical medicine and rehabilitation services. Test-retest and interrater reliability coefficients were high, and subsequent research has shown the Barthel to be highly predictive of rehabilitation outcomes such as recovery from injury.[3,4] The MBI has been shown to have similar reliability and predictive validity as the original 100-item Barthel.[2] Both the Barthel and the MBI were intended to be completed by a medical professional from observation of the patient.

Secondary Use

The MBI has been widely used as an assessment and predictive instrument for adults with a variety of neurological, physical, and mobility impairments, including spinal cord injury, stroke, arthritis, brain injury and tumor, and others. In addition, the MBI has been equally reliable and valid using other means of information gathering, such as self-report[5] and telephone interviews.[6] However, a study by Ranhoff and Laake[7] found that self-reported data from elderly nursing home patients was not as valid as direct observation.

Measurement of Occupational Performance

Although not directly measuring occupational performance or having items related to capabilities of returning to work, scores n the MBI have been shown to be predictive of return to work following disability. Black-Schaffer and Osberg[8] studied 79 working-age cerebrovascular accident (CVA, or stroke) patients and found that MBI scores at admission and discharge from rehabilitation were strong predictors of eventual return to work, along with absences of substance abuse prior to CVA and aphasia after CVA.

Additional Findings

The MBI has been translated to other languages but no evidence of computer entry and/or analysis was found. The MBI can be obtained through the cited research at no cost, and is quickly administered (approximately 10 minutes) and non-intrusive.

References

1. Mahoney FI, Barthel DW: Functional evaluation: the Barthel Index. Md Med J 1965; 14:61-65.
2. Granger CV, Albrecht GL, Hamilton, BB: Outcome of comprehensive medical rehabilitation: measurement by PULSES and Barthel Index. Arch Phys Med Rehabil 1979; 60:145-154.
3. Granger CV, Dewis LS, Peters NC, Sherwood CC, Barrett JE: Stroke rehabilitation: analysis of repeated measures Barthel Index measures. Arch Phys Med Rehabil 1979; 60:14-17.
4. Lazar RB, Yarkony GM, Ortolano D, Heinemann AW, Perlow E, Lovell L, Meyer, PR: Prediction of functional outcome by motor capability after spinal cord injury. Arch Phys Med Rehabil 1989; 70:819-822.
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6. Korner-Bitensky N, Wood-Dauphinee S: Barthel Index information elicited over the phone: is it reliable? Am J Phys Med Rehabil 1995; 74:9-18.
7. Ranhoff AH, Laake K: The Barthel ADL Index: scoring by the physician from patient inteviews is not reliable. Age Ageing 1993: 22;171-174.
8. Black-Schaffer RM, Osberg JS: Return to work after stroke: development of a predictive model. Arch Phys Med Rehabil 1990; 71:285-290.

Instrument/method: Beck Depression Inventory (BDI)

Primary Purpose and Description

The Beck Depression Inventory (BDI) was developed to assess the intensity of depression with respect to 21 symptom-attitude categories.[1] The BDI is a self-report inventory that consists of 21 items representing symptoms of depression, which respondents endorse on a scale from 0 to 3. The inventory is self-administered and takes 5 to 10 minutes to complete. A 13-item short form of the BDI has also been developed.[2,3] Correlations between the short and long forms have ranged from .89 to .97.3 The BDI has been widely used to assess depression for both psychiatric patients and normal populations, and over 1,000 research studies on the BDI have been performed.

Validation Methods and Samples

The original sample (n=226) used to develop the BDI was comprised of inpatients and outpatients of urban psychiatric hospitals. The data was collected in 1959 and 1960. The sample was 39% male, 35% African-American, and had a median age of 34.[1] A meta-analysis of studies on the internal consistency has shown them to range from .73 to .92 with a mean of .86.[4] The 13-item short form has demonstrated similar reliabilities. Test-retest reliabilities have ranged from .48 to .86.[4]

Concurrent validity is suggested by high to moderate correlations (.55 to .96) with clinical ratings of patients.[4] High correlations have been found with other scales that rate depression, such as the Hamilton Psychiatric Rating Scale for Depression (.73), MMPI Depression Scale (.76), and the Zung Self Reported Depression Scale (.76). The BDI has been able to discriminate psychiatric from non-psychiatric populations , and has also discriminated between patients with major depressive disorders and those with dysthymic disorders .[5,6] Factor analytic studies have found a general factor of depression on the BDI as well as specific factors of negative attitudes toward self or suicide, performance impairment, and somatic disturbance.[7]

Secondary Use

The BDI has been adapted for use with children and adolescents, and has been used in many studies with elderly populations.[8]

Measurement of Occupational Performance

Depressive affect reflected in scores on the BDI have been associated with concern about unemployment and stronger endorsement of internal causes of unemployment.[9] In a Swedish sample, unemployed women scored higher on the BDI than employed women even when controlling for social support, stressful life events, and marital status.[10] In a study of 103 lower back injured men receiving outpatient pain treatment, participants working 5 to 6 months post injury scored higher on the BDI than those

with injuries of less than a month duration.[11] This suggests a continuing problem with pain may be associated with depression.

Additional Findings

Several computerized forms of the BDI have been developed. The BDI has been translated into several languages.

Location

Psychological Corporation
555 Academic Court
San Antonio, TX 78204

References

1. Beck AT. Depression: causes and treatment. Philadelphia: University of Pennsylvania, 1967.
2. Beck AT, Beck RW: Screening depressed patients in family practice: A rapid technique. Postgraduate Medicine 1972: 52: 81-85.
3. Beck AT, Rial WY, Rickels K: Short form of depression inventory: Cross-validation. Psych Reports 1974; 34:1184-1186.
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7. Tanaka JS, Huba GJ: Confirmatory hierarchical factor analysis of psychological distress measures. J Pers Soc Psychology 1984; 54: 328-333.
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9. Feather NT, Barber JG: Depressive reactions and unemployment. J Abnormal Psychology 1983; 92: 185-195.
10. Hall EM, Johnson JV: Depression in unemployed Swedish women. Soc Sci Med 1988; 27: 1349-1355.
11. Beaudet J, Rasch J: The relationship of depression to work status during the acute period of low back pain. Rehab Counseling Bull 1988; 31: 198-203.

Instrument/method: Brain Injury Rehabilitation Scale (BIRS)

Primary Purpose and Description

The Brain Injury Rehabilitation Scale (BIRS) was designed as a measure of progress toward rehabilitation goals for individuals who have acquired brain injuries. Rehabilitation goals which are assessed include cognition, social skills, psychological adjustment to injury, and vocational readiness. The BIRS contains 22 items requesting perceptions of problems experienced during the past week. These are rated on a five-point Likert-scale from "always" to "never." Scale scores are derived by summing the ratings for the individual, with higher scores suggesting difficulty meeting goals. Three parallel forms were included in the BIRS, one for self-rating, one for relative rating, and one for program staff rating.

Validation Methods and Samples

Validation activities[1] were conducted on a sample of five individuals with brain injuries attending outpatient rehabilitation with an emphasis on work readiness. Inter-rater reliability averaged .91, range from .87 to .94. Test-retest reliability was assessed through three repeated measures one week apart. Test-retest correlations were significant at .53, .59, and .90. Increase in BIRS scores was consistent with relatives' and staff ratings, suggesting validity for the self-reported scores.

Secondary Use

The BIRS was designed as a measure of impairment and rehabilitation progress for individuals with brain injuries. No secondary uses were identified.

Measurement of Occupational Performance

The BIRS contains two items related to work performance. No subsequent validation of return to work outcomes was found.

Additional Findings

The BIRS is a quick self-report rating scale. No estimate of completion time was found, but would likely average less than 10 minutes. Use of self-report, relative, and staff forms allows for verification of self-report data.

Availability

The BIRS can be reproduced from the reference.

References

1. Farmer JE, Frank RG. The Brain Injury Rehabilitation Scale (BIRS): a measure of change during post-acute rehabilitation. Brain Inj 1988; 2:323-331.

Instrument/method: Brief Disability Questionnaire (BDQ)

Primary Purpose and Description

The Brief Disability Questionnaire (BDQ) is an international measure of disability developed by the World Health Organization (WHO) from the Medical Outcomes Study Short-Form General Health Questionnaire.[1] The BDQ is a self-report instrument with items requesting respondents to indicate their level of impairment in the following areas: vigorous activities such as heavy lifting or sports; moderate activities such as carrying groceries; climbing stairs or walking uphill; bending, lifting, or stooping; walking long distances; eating, dressing, bathing, or toileting; termination of activities, such as hobbies; and limitation of family activities.

Validation Methods and Samples

Information regarding the validation of the BDQ is currently in press and therefore not fully known; however, Ormel et al[2] summarize validity analyses. They report a Cronbach's alpha internal consistency coefficients of .84 to .94 across validation centers, with a pooled estimate of .88.

Secondary Use

The BDQ is a recently developed instrument and no secondary uses were identified.

Measurement of Occupational Performance

The BDQ contains items related to the ability to perform heavy and moderate work. No research was found which related the BDQ to occupational performance or employability.

Additional Findings

As a self-report questionnaire, the BDQ is quick to administer. It has been translated into a number of languages. There are no identified safeguards for verification of self-reported information.

Availability

The BDQ is available from:

John Ormel, PhD
Department of Psychiatry
University of Groningen
P. O. Box 30.001
9700 RB Groningen
The Netherlands

References

1. VoKorff M et al. Self-report of disability: the reliability and validity in an international primary care study. J Clin Epidem, in press.
2. Ormel J, VonKorff M, Ustun TB, Pini S, Korten A, Oldehinkel T. Common mental disorders and disability across cultures: results from the WHO collaborative study on psychological problems in general health care. Psychopath Disabil 1994; 272:1741-1748.

Instrument/method: Brief Psychiatric Rating Scale (BPRS)

Primary Purpose and Description

The Brief Psychiatric Rating Scale (BPRS) was developed to provide a quick method for assessing psychopathology. The initial 16-item scale was later expanded to its current 18-item form.[1,2] The BPRS is widely used to assess severe psychopathology, including schizophrenia, depression, and dementia. The person conducting the assessment first does a 20 minute interview and then rates the patient on each of the 18 symptoms. Ratings are made on a seven-point scale from 0 ("Not Present") to 7 ("Extremely Severe"). Ratings can be summed to provide an overall score of maladjustment. Although primarily a psychiatric instrument, the BPRS does include items related to symptoms that are characteristic of organic conditions (e.g., Motor retardation, Conceptual disorganization).

Validation Methods and Samples

The median inter-rater reliability of the total score across a number of studies of the BPRS is high (.85).[3] High inter-rater reliability has also been found for each of the 18 items. Test-retest reliabilities for each of the 18 items at three- to six-months ranged from near 0 to .91.[4] Validity evidence for the BPRS is provided by over one thousand studies.[4] Diagnoses made with the BPRS are highly correlated with clinician diagnoses and other standardized instruments. Scores on the BPRS are also sensitive to clinical changes in psychopathology, particularly depression, schizophrenia, and mania.[5,6] A number of factor analytic studies have revealed five main factors: thinking disturbance, withdrawal-retardation, anxious depression, hostile suspiciousness, and agitation excitement.[4] Another factor analytic study with geropsychiatric inpatients found three factors (Conceptual Disorganization, Disorientation, Motor Retardation) that were able to discriminate between patients in the categories of mildly, moderately, and severely traumatically injured.[7]

Additional Findings

The BPRS has been translated into many languages, including Spanish, French, German, Italian, Japanese, Dutch, and Russian.

References

1. Overall JE, Gorham DR: The brief psychiatric rating scale. Psychological Reports 1962; 10:799-812.
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3. Hedlund JL, Vieweg BW: The brief psychiatric rating scale (BPRS): A comprehensive review. J Operat Psychiatry 1980; 11:48-65.
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5. Faustman WO, Moses JA, Csernansky JG, White PA: Correlations between the MMPI and the brief psychiatric rating scale in schizophrenic and schizoaffective patients. Psychiatry Res 1989; 28:135-143.
6. Margo GM, Dewan MJ, Fisher S, Greenberg RP: Comparison of three depression rating scales. Perceptual and Motor Skills 1992; 75:144-146.
7. Levin HS. Outcome after head injury: Neurobehavioral recovery. In: Becker

DP, Povlishcok JT, eds. Central nervous system trauma: Status report--1985. Washington, DC: National Institutes of Health 1985.

Instrument/method: Brief Symptom Inventory (BSI)

Primary Purpose and Description

The Brief Symptom Inventory (BSI) is a 53-item short form of the SCL-90-R to measure psychological adjustment.[1] It is a self-report paper-and-pencil test with respondents endorsing each of 53 psychological symptoms on a 5-point (0=not at al, 4=extremely) Likert-type scale to indicate the level of distress with a given symptom in the past week. Items can be summed into nine subscales (somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism) or a total score called the Global Severity Index (GSI).

Validation Methods and Samples

A two-week test-retest reliability of .90 has been reported for the BSI.[1] High estimated internal consistency has also been found.[2] The BSI generates similar symptom dimensions and global ratings as the parent instrument. Correlations between the BSI and the SCL-90-R for symptom dimensions with psychiatric outpatients ranged from .92 to .99.[1] Results of a study with severely head injured patients found patient BSI scores following their injuries were consistent clinician reports of emotional distress in head-injured individuals.[3] The obsessive-compulsive, anxiety, phobic anxiety, and psychoticism scales were all elevated for the head inured patients. Impressive convergent validity was demonstrated with like dimensions of the MMPI.[1] Construct validity was established through factor analysis that supported at least 7 of the 9 dimensions of the BSI.

Secondary Use

The BSI is widely used in studies investigating variables that predict various patient outcomes. For example, BSI discharge scores were found to predict future distress in cancer patients.[4]

Measurement of Occupational Performance

A study of 63 industrial workers with work-related upper-limb disorder using the BSI found an interaction between physical and psychological factors in predicting pain and disability.[5]

References

1. Derogatis LR, Melisaratos N: The brief symptom inventory: An introductory report. Psychological Med 1983; 13:595-605.
2. Soskolne V, De-Nour AK: The psychosocial adjustment of patients and spouses to dialysis treatment. Soc Sci Med 1989; 29: 497-502.
3. Hinkeldy NS, Corrigan JD: The structure of head-injured patients' neurobehvaioural complaints: A preliminary study. Brain Injury 1990; 4:115-134.
4. Zabora JR, Smith-Wilson R, Fetting JH, Enterline JP: An efficient method for psychosocial screening cancer patients. Psychosomatics 1990; 31: 192-196.
5. Helliwell PS, Mumford DB, Smeathers JE, Wright V: Work-related upper-limb disorder: The relationship between pain, cumulative load, disability, and psychological factors. Ann Rheum Dis 1992: 51; 1325-1329.

Instrument/method: Category Test (HCT)

Primary Purpose and Description

The Halstead Category Test (HCT) assesses abstracting ability with 208 visually-presented items.[1,2] The original mechanized version was cumbersome and time-consuming to administer. The test is used to distinguish normal and brain-damaged individuals. More specifcally, the HCT is designed to measure concept formation and abstract reasoning. The newer Booklet Category Test (BCT) and computerized version should require less administration time.[3] Administration of the BCT requires 30 to 60 minutes.

Validation Methods and Samples

Norms for the HCT have recently been revised.[4] Age and education have been found to account for between 43% and 63% of the variance in scores.[5] The HCT visuospatial component is moderately to highly correlated with Block Design, Object Assembly, and Picture Arrangement scores on the WAIS.[6,7] The HCT has the strongest capacity to identify brain damage of any of the tests in the Halstead battery and is nearly as valid as the whole battery. Discriminate sensitivity of alcoholics is also sound. Principal components analysis suggested the CAT measures an abstract conceptual processing dimension similar to that measured by the Wisconsin Card Sorting Test.[8] A number of short forms of the HCT have been studied. A 120-item form has a high correlation with the HCT long form (.95 and above) and a relatively low standard error of estimate. A 108-item form also has a high correlation with the long form (.91) but has a lower prediction accuracy than the 120-item form.[9] A 64-item version has also been proposed as a screening device.[10]

Additional Findings

The HCT is widely available and non-intrusive. A computer-administrated version of the HCT is available.[11]

References

1. Halstead WC. Brain and intelligence. Chicago: University of Chicago Press, 1947.
2. Reitan RM, Wolfson D. The Halstead-Reitan neuropsychological test battery. Tucson, AZ: Neuropsychology Press, 1985.
3. DeFilippis NA, McCampbell E, Rogers P: Development of a booklet form of the category test: Normative and validity data. J Clin Neuropsychology 1979: 1:339-342.
4. Heaton RK, Grant I, Matthews CG. Comprehensive norms for an expanded Halstead-Reitan battery: Demographic corrections, research findings, and clinical applications. Odessa, FL: Psychological Assessment Resources, 1991.
5. Prigatano GP, Parsons OA: Relationship of age and education to Halstead test performance in different patient populations. J Consulting Clin Psychology 1976; 44:527-533.
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11. DeFilippis NA, PAR Staff. Category test: Computer version, research edition. Odessa, FL: Psychological Assessment Resources, no date.

Instrument/method: Cognitive Capacity Screening Examination (CCSE)

Primary Purpose and Description

The CCSE is a 30-item mental status questionnaire developed to locate possible organic mental syndromes among medical patients. A score on the CCSE of less than 20 indicates cognitive impairment.

Validation Methods and Samples

In a study investigating the reliability and validity of 3 mental status questionnaires in elderly hospitalized patients, the CCSE was found to be the most valid and reliable measure of mental status in this patient population. Internal consistency as well as content, criterion-related and construct validities were examined using 66, 66-85 year old hospitalized, medical-surgical patients.

The CCSE was also used with 50 consecutive patients seen on a psychiatric consultation service. The CCSE was reliable on independent examinations and was statistically valid as a screening device in its association with delirium and dementia. Presence of psychotic symptoms was a confounding variable, but sex, age, education level, and length of time between serial examinations had no effect on reliability or validity. Findings suggest that the CCSE is a useful brief mental status exam.

Secondary Use

The CCSE has been used with head injury patients, those with Wernicke-Korsakoff syndrome, with a neurosurgical population, and with patients on an acute rehabilitation ward besides being used with elderly populations with varying forms of dementia (e.g. dementia of the Alzheimer type, ischemic vascular dementia, multi-infarct dementia).

Measurement of Occupational Performance

No research was found which uses the CCSE to directly predict occupational performance. The CCSE is used most frequently as a brief assessment instrument for cognitive functioning rather than as a predictor of future performance.

Additional Findings

The time cost and effort of routinely performing the CCSE with all patients accepted by one rehabilitation ward were found to be negligible. Findings show the utility of the CCSE for both diagnostic and research purposes with geriatric psychiatric populations.

Availability

Information not available.

References

1. Meyer ME, Schuna AA. Assessment of geriatric patient's functional ability to take medication. DICP 1989; 23:171-174.
2. Strain JJ, Fulop G, Lebovits A, Ginsberg B, Robinson M, Stern A, Charap P, Gany F. Screening devices for diminished cognitive capacity. Gen Hosp Psychiatry 1988; 10:16-23.
3. Foreman MD. Reliability and validity of mental status questionnaires in elderly hospitalized patients. Nurs Res 1987; 36:216-220.
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5. Haddad LB, Coffman TL. A brief neuropsychological screening exam for psychiatric-geriatric patients. Clinical Gerontologist 1987; 6:3-10.
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Instrument/method: Craig Handicap Assessment and Reporting Technique (CHART)

Primary Purpose and Description

The Craig Handicap Assessment and Reporting Technique (CHART) is a recently-developed instrument based on the dimensions of handicap developed by the World Health Organization (WHO).[1] This model defines six dimensions that encompass the broad domain of handicap: orientation, physical independence mobility, occupation, social integration, and economic self-sufficiency. The 27 items that comprise CHART are organized into six areas:

- What assistance do you need? (3 items)
- Are you up and about regularly? (5 items)
- Is your transportation adequate? (4 items)
- How do you spend your time? (7 items)
- With whom do you spend time? (6 items)
- What financial resources do you have? (2 items)

The CHART is scored through a weighting procedure, with a maximum score of 500.

Validation Methods and Samples

CHART validation activities[1] were conducted with 135 individuals with spinal cord injuries and 88 individuals without disabilities as the normative group. The SCI sample had a mean age of 33 years, with a range of 16 to 74. Test-retest reliability correlation coefficients ranged from 0.80 to 0.95 across the domains, with an overall coefficient of 0.93. Internal validity was assessed through correlations of domain and total scores and subject-proxy score correlations, with statistically significant findings. Rasch analysis showed a relatively good item "fit" within the domains.

Secondary Use

While CHART has been used primarily as an assessment of individuals with spinal cord injuries,[2,3] a recent study indicated that the technique is also valid for individuals who are disabled from stroke.[4]

Measurement of Occupational Performance

CHART contains items related to occupational performance. Because this is a very recently developed instrument, no research was found which validated these items, or the CHART instrument as a whole, in relation to return to work. However, high positive correlations of self-reported occupational activity and proxy-reported occupational activity suggests some relation of item ratings to actual occupational performance.

Additional Findings

Time requirements for completion of CHART were not found; however, as a self-report questionnaire the time to administer and score the instrument would not be excessive. There are no controls for verification of effort or patient self-report of disability.

Availability

CHART items are presented in the first reference. Items and a scoring guide are available from:

Gale Whiteneck, PhD
Research Department
Craig Hospital
3425 S. Clarkson
Englewood, CO 80110

References

1. Whiteneck GG, Charlifue SW, Gerhart KA, Overholser D, Richardson GN. Quantifying handicap: a new measure of long-term rehabilitation outcomes. Arch Phys Med Rehabil 1992; 73:519-526.
2. Tate D, Forchheimer M, Maynard F, Dijkers M. Predicting depression and psychological distress in persons with spinal cord injury based on indicators of handicap. Am J Phys Med Rehabil 1994; 73:175-183.
3. Fuhrer MJ, Rintala DH, Hart KA, Clearman R, Young ME. Depressive symptomology in persons with spinal cord injury who reside in the community. Arch Phys Med Rehabil 1993; 74:255-260.
4. Segal ME, Schall RR. Assessing handicap of stroke survivors: a validation study of the Craig Handicap Assessment and Reporting Technique. Am J Phys Med Rehabil 1995; 74:276-286.

Instrument/method: Disability Rating Form (DRF)

Primary Purpose and Description

The Disability Rating Form (DRF)[1] was developed as a brief, practical instrument for rating disabilities associated with persistent mental illness and its duration. The DRF consists of five items corresponding to five areas of disability: activity of daily living, social functioning, concentration and task performance, adaptation to change, and impulse control. Each item is accompanied by a five-point rating scale with behavioral guidelines for assigning a rating, from no impairment to extreme impairment. The person completing the form (typically a psychologist or therapist) provides justification for each rating given. The DRF includes a training manual to standardize administration.

Validation Methods and Samples

The DRF was validated on a sample (n=706) of adult consumers of community mental health services in Kentucky.[2] All had DSM-III-R diagnoses of schizophrenia, mood disorders, delusional disorders, or other psychotic disorders. Of the 706, 135 were selected for validation studies. Test-retest correlation coefficients ranged from .61 to .72 across the five items. Coefficient alpha was .86 for the first testing and .87 for the second. Confirmatory factor analysis showed excellent factor loading on the five items, with a Bentler's comparative fit index (CFI) of .996. Duration of disability was significantly correlated with DRF scores. The DRF discriminated between consumers with mild disabilities, as from depression, and those with more severe mental illness, such as schizophrenia or psychosis.

Secondary Use

The DRF was designed as a screening instrument for individuals with mental illness disabilities. No secondary uses were identified.

Measurement of Occupational Performance

Item #3, Concentration and Task Performance, requests the examiner to assess the individual's ability to perform short, simple, routine tasks. No research was found which assessed the DRF's predictive ability for return to work or occupational performance.

Additional Findings

No other findings were evident for the DRF.

Availability

DRF items and rating scales can be derived free of charge from the first reference. A

manual for administration can be obtained from:

Rick H. Hoyle
Department of Psychology
208 Kastle Hall
University of Kentucky
Lexington, KY 40506-0044

References

1. Hoyle RH, Nietzel MT, Guthrie PR, Baker-Prewitt JL, Heine R. The Disability Rating Form. Psychosoc Rehabil J 1993; 16(3):153-160.
2. Hoyle RH, Nietzel MT, Guthrie PR, Baker-Prewitt JL. The Disability Rating Form: a brief schedule for rating disability associated with severe mental illness. Psychosoc Rehabil J 1992; 16(1):77-94.

Instrument/method: Disability Rating Index (DRI)

Primary Purpose and Description

The Disability Rating Index (DRI)[1] is a clinical instrument developed by Erik Spangfort, an orthopedic surgeon specializing in spinal disorders. The DRI is a self-report instrument for assessing physical function and impairment from pain, hip and knee function, and gross body movements. The DRI's 12 items include walking without assistance, walking outdoors, climbing stairs, sitting for long periods, standing over a sink, carrying a bag, making a bed, running, light work, heavy work, lifting heavy objects, and participating in exercise or sports. The patient marks on a 100-mm visual analogue scale in accordance with his or her presumed ability to perform the activity. The end points of the scale are coded without difficulty and not at all. The scale is scored by measuring the distance from one end point and calculating a score based on a total scale score of 100.

Validation Methods and Samples

The validation sample for the DRI consisted of 1458 individuals, of whom 366 had physical disabilities such as chronic pain, arthritis, and multiple sclerosis. Subsamples were selected for validation analyses. Test-retest correlations were .70 to .92 for the items and .95 for the complete DRI. The interrater reliability correlation was .99. Internal consistency Cronbach's alpha was .84. Construct validity was assessed by the DRI's ability to discriminate between healthy and impaired individuals, which was achieved to a significant level ($p<.0001$). Concurrent validity was established through positive correlations of the DRI with the Functional Status Questionnaire, the Oswestry Low-Back Pain Disability Questionnaire, and performance on an obstacle course which included tasks and activities described in the DRI.

Secondary Use

The DRI is a very recently developed instrument, and no secondary uses have been identified.

Measurement of Occupational Performance

The DRI contains three items related to occupational performance, light work, heavy work, and lifting heavy objects. Light work in the obstacle course consisted of standing, washing dishes for a breakfast for four. Heavy work consisted of vacuum cleaning, floor mopping, and whipping four sofa cushions. Heavy lifting consisted of lifting a crate of beer weighing 15 kg three times from the floor to waist height. No research was found which examined the predictive validity of the full DRI or these three items on return to work or occupational performance.

Additional Findings

Because DRI items are arranged in increasing order of physical demand, consistency of responses can be observed.[1] The mean completion time of the DRI was 2.7 minutes, with a range of 2 to 4; mean scoring time was 1.2 minutes, ranging from 1 to 2. The DRI can be duplicated without cost from the cited reference.

References

1. Salen BA, Spangfort EV, Nygren AL, Nordemar R. The Disability Rating Index: an instrument for the assessment of disability in a clinical setting. J Clin Epidemiol 1994; 47:1423-1434.

Instrument/method: Disability Rating Scale (DRS)

Primary Purpose and Description

The Disability Rating Scale (DRS),[1] sometimes referred to as the Rappaport Disability Rating Scale, was developed as an instrument for assessing disability from severe head trauma and for tracking progress during recovery. The DRS consists of eight items in four categories: (1) arousal and awareness (taken directly from the Glasgow Coma Scale), (2) cognitive ability to handle self-care functions, (3) physical dependence on others, and (4) psychosocial adaptability for employment, housework, or school. Each of the eight items are rated by a trained examiner using Likert-scaled scores. DRS scores can range from 0 (no disability) to 29 (extreme vegetative state). The DRS has been shown to have high predictive utility for rehabilitation outcomes,[2,3] including return to work.

Validation Methods and Samples

The validation sample for the DRS consisted of 88 individuals admitted within 90 days of injury to a rehabilitation center. Information was gathered either through direct observation or from interviews with nursing staff. Interrater correlations between three pairs of raters were from .97 and .98. There were also a significant correlations between DRS scores and evoked brain potential abnormality through auditory, visual, and somatosensory evoked potential.

Secondary Use

The DRS has been used exclusively for the assessment of brain damage and monitoring the course of recovery for individuals sustaining brain trauma.

Measurement of Occupational Performance

The DRS contains one item requiring a rating of the individual's overall cognitive and physical abilities to be an employee, homemaker, or student. The factors used to assess the individual are his or her ability to understand, remember, and follow instructions; to plan and carry out simple tasks; to remain oriented, relevant, and appropriate in work settings; to get to and from work and shopping effectively; to deal with numerical concepts; to handle simple money exchanges; and to keep schedules and appointments. The rating system is simply not restricted, selected jobs, competitive, sheltered workshop, and not employable. In subsequent research, the DRS has been shown to have predictive value for return to work for individuals with brain injury. For example, Rao and Kilgore[4] studied 57 consecutive admissions to an inpatient brain injury rehabilitation program and found that DRS scores at admission and discharge predicted return to work or school by the end of the follow-up period (up to 26 months).

Additional Findings

The DRS is very brief, requiring about 10 minutes to complete. Because it is completed either through observation or interviews with caregivers, verification of maximal effort is good.

Availability

The DRS is available from:

Maurice Rappaport, MD
U.C. Brain Function Study Unit
Agnews State Hospital
San Jose, CA 95134

References

1. Rappaport M, Hall KM, Hopkins K, Bellaza T, Cope DN. Disability Rating Scale for severe head trauma: coma to community. Arch Phys Med Rehabil 1982; 63:118-123.
2. Fleming JM, Maas F. Prognosis of rehabilitation outcome in head injury using the Disability Rating Scale. Arch Phys Med Rehabil 1994;75:156-163.
3. Gouvier WD, Blanton PD, LaPorte KK, Nepomuceno C. Reliability and validity of the Disability Rating Scale and the Levels of Cognitive Functioning Scale in monitoring recovery from severe head injury. Arch Phys Med Rehabil 1987; 68:94-97.
4. Rao N, Kilgore KM. Predicting return to work in traumatic brain injury using assessment scales. Arch Phys Med Rehabil 1992; 73:911-916.

Instrument/method: Duke Health Profile (DUKE)

Primary Purpose and Description

The 17-item Duke Health Profile (DUKE) was developed as a refined version of the 63-item DUKE-UNC Health Profile (DUHP). It is a brief, generic self-report instrument containing 6 health measures (physical , mental, social, general, perceived health, and self-esteem), and 4 dysfunction measures (anxiety, depression, pain, and disability). It is presented as a technique for measuring health as an outcome of medical intervention and health promotion.

Validation Methods and Samples

Reliability of the DUKE was established using a study population of 683 primary care adult patients. Results indicated Cronbach's alphas of 0.55-0.78 and test-retest correlations of 0.30-0.78. Convergent and discriminant validity were demonstrated by score correlations between the DUKE and 3 other instruments (Sickness Impact Profile, Tennessee Self-Concept Scale, and the Zung Self-Rating Depression Scale). Clinical validity was supported by differences between the health scores of patients with clinically different health problems.

Secondary Use

The DUKE has been used to measure health status of populations other than general medical patients. For example, the impact of hypertension and co-morbidity was studied using the DUKE. In another study, the self-reported health status of 286 first-year medical students in four consecutive classes at Duke University was measured by the DUKE at the beginning and end of the school year.

Measurement of Occupational Performance

No studies were reviewed in which the DUKE was used to measure occupational performance. The DUKE is a general measure used to examine health-related quality of life.

Additional Findings

Investigators may favor the DUKE over other health status measures in situations in which patient acceptance or ease of completion is a key issue.

Availability

Information not available.

References

1. Parkerson GR Jr., Broadhead WE, Tse, CK. The Duke Health Profile. A 17-item measure of health and dysfunction. Med Care 1990; 28:1056-1072.
2. Parkerson GR Jr., Broadhead WE, Tse CK. Development of the 17-item Duke Health Profile. Fam Pract 1991; 8:396-401.
3. Lahad A, Yodfat Y. Impact of comorbidity on well-being in hypertension: case control study. J Hum Hypertens 1993; 7:611-614.
4. Chen AL, Broadhead WE, Doe EA, Broyles WK. Patient acceptance of two health status measures: the Medical Outcomes Study Short-form General Health Survey and the Duke Health Profile. Fam Med 1993; 25:536-539.
5. Parkerson GR Jr., Broadhead WE, Tse, CK. The health status and life satisfaction of first-year medical students. Acad Med 1990; 65:586-588.

Instrument/method: Edinburgh Rehabilitation Status Scale (ERSS)

Primary Purpose and Description

The Edinburgh Rehabilitation Status Scale (ERSS)[1] was developed at the Princess Margaret Rose Hospital in Edinburgh, England. It is designed to measure four dimensions in which changes may occur over the course of a disabling illness or injury. These dimensions, which form the four ERSS subscales, are independence, physical and intellectual activity, social integration and isolation, and the effect of symptoms on lifestyle. Each subscale has eight grades, 0 to 7, with higher numbers corresponding to greater levels of severity. Grades 1, 3, 5, and 7 have detailed operational definitions, but administrators may also use the intermediate grades in scoring. The ERSS can be completed in five minutes if the scorer is familiar with the individual being rated; if not, information needed to complete the assessment is derived from interviews with the person or significant others, or through information derived from any available records or persons.

Validation Methods and Samples

Validation of the ERSS[1] was conducted with 150 individuals receiving inpatient, outpatient, and day treatment services at the Princess Margaret Rose Hospital Rehabilitation Studies Unit. Disabling conditions included musculoskeletal, cardiac, and neurological conditions, amputations, stroke, chronic pain, arthritis, and multiple disabilities. Inter-rater reliability correlation coefficients across the four dimensional scores were reported to range between 0.87 and 0.97. Concurrent validity was established through high correlations of ERSS scores and those of the Barthel Index and the PULSES Profile. Inter-correlations of the subscales ranged from 0.59 to 0.70. Factor analysis for each subscale found a single factor of high significance.

Secondary Use

The ERSS is designed as a clinical evaluation and assessment instrument for use with any type of disabling condition. Further research has tended to focus on individuals with diseases and other health problems.[2,3] A recent study by Mattison et al[4] found that the ERSS was sensitive to overall function for individuals with both physical and mental handicap in comparison to the Barthel Index and the PULSES Profile.

Measurement of Occupational Performance

The Activity/Inactivity subscale of the ERSS requests ratings of the individual's capacity to initiate and perform physical work. There is no emphasis on engagement in productive or paid work. No research was found that related ERSS scores or subscale scores to employability.

Additional Findings

The ERSS can be administered quickly by an interdisciplinary team which is familiar with the individual. It is not known how much time would be required when the rater is completely unfamiliar with the subject.

Availability

The ERSS forms and manual can be obtained through:

J.W. Affleck
Rehabilitation Services Unit
Princess Margaret Rose Hospital
Edinburgh EH10 7ED
United Kingdom

References

1. Affleck JW, Aitken RCB, Hunter JAA, McGuire JR, Roy CW. Rehabilitation status: a measure of medicosocial dysfunction. Lancet 1988; 1(8579):230-233.
2. Gutschmidt S, Hanisch S. Integrated therapy approach in the inpatient rehabilitation of women and men with total gastroectomy for stomach carcinoma. Rehabilitation (Sttutg) 1994; 33:228-236.
3. Disler PB, Roy CW, Smith BP. Predicting hours of care needed. Arch Phys Med Rehabil 1993; 74:139-143.
4. Mattison PG, Aitken RC, Prescott RJ. Rehabilitation status in multiple handicap. Arch Phys Med Rehabil 1992; 73:926-929.

Instrument/method: ERGOS Work Simulator

Primary Purpose and Description

The ERGOS Work Simulator is designed to assess job-relevant physical capacities and tolerances. ERGOS is a computerized simulator that provides objective documentation of the worker's performance compared to the Dictionary of Occupational Titles (DOT) classification system, NIOSH Work Practices Guide for Manual Lifting, and Methods Times Measurements (MTM) standards for workers of the same age and sex. ERGOS consists of five work stations arranged in a pentagon. A computer monitor and speaker system are built into the work station design. Each station assesses a specific functional capacity, including (1) static strength during isometric lifting, pushing and pulling, and dynamic strength in lifting from ankle to shoulder height; (2) whole body range of motion, balancing, standing, stooping, kneeling, etc.; (3) work endurance through repetitive tasks; (4) standing work tolerance; and (5) grip strength and handling.

Validation Methods and Samples

The ERGOS Work Simulator was validated with a sample of 78 individuals age 22 to 64 with various types of physical limitations due to injuries.[1] Scores on the subtests of the ERGOS correlated highly with criterion measures, such as VALPAR standardized work sample tests, clinical evaluation from a rehabilitation therapist, and performance on Industrial SHOPS work simulation tasks.

Secondary Use

The ERGOS Work Simulator is designed as a global assessment of physical capacity to engage in work tasks. In a separate study, the ERGOS Work Simulator was used to compare self-assessments of pain and physical activity with objective measures.[2]

Measurement of Occupational Performance

Although the ERGOS Work Simulator shows concurrent validity with other standardized assessments, no predictive validation was found, such as prediction of return to work or occupational performance.

Additional Findings

The ERGOS protocol requires from 2.5 to 4 hours to complete, with an additional 15 to 30 minutes to produce the summary report. The ERGOS system requires considerable capital costs for the work stations and computer equipment.

Availability

Information on the ERGOS Work Simulator is available from:

Dr. Christopher Cooke
Functional Evaluation Unit
Worker's Compensation Board of British Columbia
6951 Westminster Highway
Richmond, British Columbia, Canada V7C 1C6

References

1. Dusik LA, Menard MR, Cooke C, Fairburn SM, Beach GN. Concurrent validity of the ERGOS Work Simulator versus conventional capacity evaluation techniques in a workers' compensation population. J Occup Med 1993;35:759-767.
2. Cooke C, Dusik LA, Menard MR, Fairburn SM, Beach GN. Relationship of performance on the ERGOS Work Simulator to illness behavior in a workers' compensation population with low back versus limb injury. J Occup Med 1994; 36:757-762.

Instrument/method: Framingham Functional Assessment Scale (FFAS)

Primary Purpose and Description

The Framingham Functional Assessment Scale (FFAS) at the Framingham Day Hospital in Framingham, MA, and is a global measure of psychiatric function. It has its origins in a level of functioning (LOF) scale used in a pilot project for the development of a client-oriented cost-outcome system for Medicaid reimbursement.[1] The FFAS has three subsections: Task Performance, Social Functioning, and Emotional Functioning. Each subscale is comprised of functional indicators which are descriptively developed through eight levels of a continuum. These scales are completed at four-week intervals by therapists and other staff as a measure of rehabilitation progress.

Validation Methods and Samples

Initial validation with psychiatric patients yielded high test-retest and inter-rater reliablity measures.[1] A follow-up study[2] with 45 patients indicated high validity of the instrument when used to measure client improvement after a 13-week intensive program of treatment.

Secondary Use

The FFAS was developed as a screening and monitoring instrument for individuals with psychiatric impairment. No secondary uses were identified.

Measurement of Occupational Performance

There are no measurements of occupational performance on the FFAS, nor was research found which related FFAS scores with employment.

Additional Findings

The FFAS can be administered in three to five minutes. The FFAS is completed by a team of professional staff, which while potentially more valid than self-report, may create difficulties with assessments of SSA populations.

Availability

The FFAS can be obtained through:

Iris Carroll or John Williams
Framingham Day Hospital
Framingham, MA 01701

References

1. Williams J. The Framingham Functional Assessment Scale. In Maxey J, Luber R, Lefkowitz P (eds.), Proceedings of the Annual Conference on Partial Hospitalization, vol. 4. Boston: American Association for Partial Hospitalization, 1980:183-192.
2. Carroll I, Williams J. Functional assessment in partial hospitalization: clinical and administrative applications and implications after one year's utilization of the Framingham Functional Assessment Scale. Int J Partial Hospitalization 1982; 1:327-339.

Instrument/method: Functional Assessment Inventory (FAI)

Primary Purpose and Description

The Functional Assessment Inventory (FAI) is an abbreviated version of the OARS Multi-dimensional Functional Assessment Questionnaire developed at the Duke University Center for the Study of Aging and Human Development. The FAI is completed by an interviewer, and requires approximately 30 minutes to complete. The FAI incorporates the Short Portable Mental Status Questionnaire, demographic information, social resources information, economic information, mental health information (including the 15-item Short Psychiatric Evaluation Schedule), information on physical health, activities of daily living (ADL) information, social and medical services used and needed, an informant section completed by someone who is familiar with the individual, an assessment of the interviewer of the reliability of the data and judgments of the subject's replies and reactions, and a series of five brief rating scales of disability. The FAI derives both a composite score and cluster scores from the above sections. The FAI was originally developed as a screening, assessment, and monitoring tool for members of the elderly population.[1]

Validation Methods and Samples

Validation activities for the FAI[2] were completed on a sample of 157 elderly individuals receiving nursing or rehabilitation services. Statistically significant inter-rater reliability correlations were found for all components of the inventory. Strong intraclass correlations were found between the FAI's component sections, the instruments from which they were derived, and independent observers of the testing sample members.

Secondary Use

Although specifically developed to assess members of the elderly population, the FAI has frequently been utilized as an assessment instrument for other populations. For example, Fraser et al[3] modified the inventory for functional assessment of women following surgery. The FAI has also been used in the assessment of persons with mental illness and brain injuries (see *Measurement of Occupational Performance* below).

Measurement of Occupational Performance

The FAI has been used as a clinical tool for persons with brain injuries and persistent mental illness, and has been shown to have predictive value for assessing vocational readiness. Mysiw et al[4] used the FAI as a screening instrument for 76 persons with moderate and severe brain injuries for participation in vocational planning, rehabilitation, and employment. They found that the FAI composite score had greater discriminating power than two instruments developed specifically for the population (Rancho Los Amigos Levels of Cognitive Functioning and the Glasgow Outcome

Scale) and also greater than the Mini-Mental State for the global assessment of mental impairment. Wallner and Clark[5] studies job retention in competitive and supported employment of 92 working-age individuals with severe mental illness. They found that the FAI composite score and scores on five subscales were related to long-term job retention.

Additional Findings

The FAI contains two mechanisms for verification of effort and information. First, a section of the inventory is completed by a third-party respondent, such as spouse or parent, allowing for assessing comparability of responses. Second, the interviewer completes a section on perceived reliability of the data and reactions of the person tested. The FAI is relatively brief (approximately 30 minutes) but because of its multidimensionality requires more time than most interview assessments.

Availability

The FAI is available from:

Eric Pfeiffer, MD
University of South Florida Medical Center
Box 50
Tampa, Florida 33612

References

1. Pfeiffer E, Johnson TM, Chiofolo RC. Functional assessment of elderly subjects in four service settings. J Am Ger Soc 1981;29:433-437.
2. Cairl RE, Pfeiffer E, Keller DM, Burke H, Samis HV. An evaluation of the reliability and validity of the Functional Assessment Inventory. J Am Ger Soc 31;607-612.
3. Fraser RA, Hotz SB, Hurtig JB, Hodges SN, Moher D. The prevalence and impact of pain after day-care tubal ligation surgery. Pain 1989;39:189-201.
4. Mysiw WJ, Corrigan JD, Hunt M, Cavin D, Fish T. Vocational evaluation of traumatic brain injury patients using the Functional Assessment Inventory. Brain Inj 1989;3:27-34.
5. Wallner RJ, Clark DW. The Functional Assessment Inventory and job tenure for persons with severe and persistent mental health problems. J Appl Rehabil Couns 1989; 20(4):13-15.

Instrument/method: Functional Autonomy Measurement System (SMAF)

Primary Purpose and Description

The Functional Autonomy Measurement System (SMAF) is an evaluation instrument developed in Canada to assist in allocating community services or chronic care beds to the elderly and disabled.[1] The primary purpose of the instrument is to assess the needs of individuals by measuring their disabilities and handicaps. The SMAF is based on classifications of impairment (i.e., disabilities and handicaps) provided by the World Health Organization. The scale consists of 29 items covering five functional areas: activities of daily living, mobility, communication, mental functions, and instrumental activities of daily living. The evaluee is given an autonomy rating on each of the 29 functions by an examiner, which is usually a nurse or social worker, on a four-point scale (0=complete autonomy, -3=total dependence). A handicap rating is also assessed for each function by considering whether the person's material and social resources compensate for any disability.

Validation Methods and Sample

The initial validation sample consisted of 146 elderly and disabled people who were clients for home care service or on the waiting list for chronic care beds.[1] Inter-rater reliability was solid both within and across examiner disciplines (nurses and social workers). Criterion validity was supported with moderate to high correlations between disability categories and average amount of care required per day in a sample of chronic care patients.

Additional Findings

SMAF evaluation interviews took an average of 42 minutes in the initial validation study. The SMAF is available in either English or French versions.

References

1. Hebert R, Carrier R, Bilodeau A: The functional autonomy measurement system (SMAF): Description and validation of an instrument for the measurement of handicaps. Age Ageing 1988; 17:293-302.

Instrument/method: Functional Independence Measure (FIM)

Primary Purpose and Description

The Functional Independence Measure (FIM) is a quick checklist of functional abilities of inpatient rehabilitation patients.[1] The FIM was originally designed with 26 items, but is most often used today in its abbreviated 18 item form. Items include self care (feeding, grooming, bathing, upper and lower extremity dressing, toileting) sphincter control, mobility, locomotion, communication and social cognition. Each item is scored on a seven point scale, from total assistance to completely independent. The instrument is administered at admission, at designated intervals, and at discharge to measure rehabilitation progress. As a component of the Uniform Data System (UDS) several hundred rehabilitation facilities use the FIM regularly.

Validation Methods and Samples

The FIM has shown high inter-rater reliability when two rehabilitation professionals independently assess the patient[2]. Concurrent and predictive validity analyses have also been performed, with some degree of success. In the most recent study rehabilitation outcome and length of rehabilitation stay was predicted using the admission FIMs of 27,699 patients, with predicted outcome variances ranging from 20% to 70%[3].

Secondary Use

Since the FIM is designed to measure degree of disability during inpatient rehabilitation, an individual must be considerably impaired for the instrument to detect a functional level significantly different from normal. Likewise, variation in normal functioning cannot be accurately assessed. The main secondary use of the FIM is therefore rehabilitation research on the inpatient level.

Measurement of Occupational Performance

Since the FIM is designed to measure degree of disability during inpatient rehabilitation, occupational performance is not a component of the instrument. FIM scores have been used as measures of rehabilitation progress, but no studies were found which indicated that FIM scores are predictive of return to work.

Additional Findings

The FIM has been used as a measure of disability for an array of populations, including persons with brain injury, multiple sclerosis, spinal cord injury, stroke, arthritis, and many others. The FIM has been adapted to computer use, and is a primary component of the Uniform Data System (UDS). As such, the FIM is a uniform measure which allows comparison, standardization, and generalization of patient outcomes among the rehabilitation facilities which use the UDS. A recent study by Grey and Kennedy[4] found that patient self-report scores on the FIM correlated highly with clinician ratings; therefore they conclude that the FIM may be equally reliable and valid as a self-report instrument.

References

1. Forer S, Granger C, et.al. Functional Independence Measure. Buffalo, NY: The Buffalo General Hospital, State University of New York at Buffalo, 1987.
2. Hamilton BB, Laughlin JA, Granger CV, Kayton RM. Interrater agreement of the seven level Functional Independence Measure (FIM) (Abstract). Arch Phys Med Rehabil 1991; 72:790.
3. Linacre JM, Heinemann AW, Wright BD, Granger CV, Hamilton BB. The structure and stability of the Functional Independence Measure. Arch Phys Med Rehabil 1994; 75:127-132.
4. Grey N, Kennedy P. The Functional Independence Measure: a comparative study of clinician and self ratings. Paraplegia 1993; 31: 457-61.

Instrument/method: Functional Status Questionnaire (FSQ)

Primary Purpose and Description

The Functional Status Questionnaire (FSQ) is a brief, self-administered questionnaire developed as a screening tool for disability and as a monitoring tool for changes in function.[1] The FSQ was derived by aggregating items included in other scales of activities of daily living (ADL) and functional capacity, then subjecting those items to factor analysis from a sample of 1,089 individuals receiving geriatric rehabilitation services.[2] The FSQ contains 28 items grouped into the following six indices: basic ADLs, intermediate ADLs, psychological function, work performance, social activity, and quality of interaction. Items are predominantly Likert-scaled, with a few questions open-ended. A scoring algorithm transforms scale scores to a 100-point scale.

Validation Methods and Samples

Inter-rater reliability of the FSQ is reported to be adequate;[1] test-retest reliability measures were not found. Analyses on a validation sample[3] (n=497) of adult age (19 to 96) found that internal consistency of the six FSQ scale scores ranged from 0.64 to 0.82. There were significant correlations between the six FSQ scale scores and scores on seven measures of general health status, including patient age, bed disability days, health satisfaction, number of close friends, and other measures.

Secondary Use

The FSQ was developed as a global measure of function. Initial studies included persons with arthritis and other physical disabilities. Additional studies were identified which used the FSQ as a measure of function for individuals with chronic pain[4] and stroke.[5]

Measurement of Occupational Performance

The FSQ contains six items related to work performance which are completed for those who were employed during the month preceding testing. Specifically, the items are: During the past month, have you: (1) Done as much work as others in similar jobs? (2) Worked for short periods of time or taken frequent rests because of your health? (3) Worked your regular number of hours? (4) Done your job as carefully and accurately as others with similar jobs? (5) Worked at your usual job, but with some changes because of your health? (6) Feared losing your job because of your health. The Likert-scale option responses are (a) all of the time, (b) most of the time, (c) some of the time, and (d) none of the time. No research was found which validated these items of the FSQ, or the FSQ in general, with return to work or occupational performance.

Additional Findings

The FSQ can be completed in about 15 minutes. It has been adapted to computer use, with IBM-PC compatible software that produces a one-page summary of transformed scale scores and single-item scores.

Availability

The FSQ software is available from:

Lisa Rubenstein, MD or Michael McCoy, MD
Department of Medicine
University of California at Los Angeles
Los Angeles, CA 90024

References

1. Jette AM, Deniston OL. Inter-observer reliability of the Functional Status Assessment Instrument. J Chron Dis 1978; 31:573-589.
2. Jette AM. Functional capacity evaluation: an empirical approach. Arch Phys Med Rehabil 1980; 61:85-89.
3. Jette AM et al. The Functional Status Questionnaire: reliability and validity when used in primary care. J Gen Intern Med 1986; 1:143-149.
4. Soderback T, Schult ML, Nordemar. Assessment of patients with chronic back pain using the Functional Status Questionnaire. Scand J Rehabil Med 1993; 25: 139-143.
5. Rapport LJ et al. Predictors of falls among right-hemisphere stroke patients in the rehabilitation setting. Arch Phys Med Rehabil 1993; 74:621-626.

Instrument/method: General Health Questionnaire (GHQ)

Primary Purpose and Description

The General Health Questionnaire (GHQ)[1] is regarded as the most widely used and most extensively researched of the global screening measures of mental health status. Originally developed in 1972 with 100 items, the GGQ versions currently in use are comprised of 12, 28, 30, and 60 items, all utilizing four-point Likert scales. Respondents are asked to indicate whether or not they have experienced a a particular symptom or item of behavior within the previous few weeks. Response options range from "less than usual" to "more so than usual." The scoring of the GHQ is from 0 to 3 or as a bimodal scale in which only pathological deviations from normal indicate possession of the trait. This second method eliminates errors due to self-reporters who consistently use the extremes or middle scores. The number of items rated as deviant indicate the GHQ score.

Validation Methods and Samples

All versions of the GHQ have shown high inter-rater and test-retest reliability.[2] Goldberg and Williams[3] provide an overview of validation activities for the four current versions of the GHQ. Concurrent validity analyses for the GHQ have shown high correlations with other psychiatric screening instruments, such as the Hamilton Depression Scale and the Symptom Checklist. They used a variance weighted mean (VWM) method to derive measures of sensitivity (the proportion of correctly identified normal cases) and specificity (proportion of correctly identified non-normal cases). Overall sensitivity ranged from 74% to 89% and specificity from 80% to 87%. Shorter versions of the GHQ tend to have greater higher sensitivity, with the GHQ-60 having better specificity.

Secondary Use

The GHQ instruments are designed as screening instruments for psychiatric disorder. No secondary uses were identified.

Measurement of Occupational Performance

The GHQ has been used as a predictor variable of employment status for disabled and nondisabled popuations alike, and as an outcome of unemployment among disabled and nondisabled populations.[4,5]

Additional Findings

The GHQ has been translated into at least 16 languages. Additional versions have been adapted for use with children and for diagnosis of mood disorder. Individuals with physical disabilities may be over-classified as false positives because of their responses to items concerning social dysfunction. Administration time varies from

approximately two minutes to 12, depending on the version used.

Availability

The GHQ can be obtained through:

David Goldberg
Department of Psychiatry
University of Manchester
Manchester, United Kingdom

References

1. Goldberg DP. The detection of psychiatric illness by questionnaire. London: Oxford University Press, 1972.
2. Goldberg DP. Use of the General Health Questionnaire in clinical work. Br Med J 1986; 297:897-899.
3. Bridges K, Goldberg D. Self-administered scales of neurotic symptoms. In Thompson C (ed), The instruments of psychiatric research. Chichester: John Wiley & Sons, 1989:157-176.
4. Bland RC, Stebelsky G, Orn H, Newman SC. Psychiatric disability and unemployment in Edmonton. Acta Psychiatr Scand Suppl 1988; 338:72-80.
5. Finlay-Jones R, Eckhardt B. Psychiatric disorder among the young unemployed. Australia and New Zealand J Psych 1981; 15:265-270.

Instrument/method: Global Assessment of Functioning (GAF) Scale

Primary Purpose and Description

The Global Assessment of Functioning (GAF) Scale originated as the Global Assessment Scale (GAS) in 1962.[1] A modified version of the GAS was included in the DSM-III-R as the GAF. The GAF is designed as a quick rating of psychological, social, and occupational functioning along a 100-point continuum. Each ten-point interval has a descriptive criteria for the scoring level. For example, the description of the interval 1-10 is:

> Persistent danger of severely hurting self or others (e.g.., recurrent violence) OR persistent inability to maintain minimal personal hygiene OR serious suicidal act with clear expectation of death.

The scoring for 61-70 includes the following:

> Some mild symptoms (e.g.., depressed mood and mild insomnia) OR some difficulty in social, occupational, or school functioning (e.g., occasional truancy, or theft within the household), but generally functioning pretty well, has some meaningful interpersonal relationships.

The GAF is scored by a clinician familiar with the individual. The format for scoring the GAF has been adapted to many other psychosocial functioning domains, such as family relationships and social performance. The GAF is now often referred to as the GAF-Modified because of changes to the rating scale and the scoring in 1995.

Validation Methods and Samples

The modified GAF was subjected to extensive validation in 1995.[2] The intraclass and inter-rater correlations of the GAF were exceptionally high. Ratings on the GAF correlated significantly with the Self-Rating Depression Scale. The modified GAF was found to be highly reliable even when administrators had varying levels of education and training. The authors note that the modified GAF may be particularly useful when inter-rater reliability is a key concern. Additional analysis in 1995[3] found that modified GAF scores correlated significantly with social, occupational, and clinical data for 196 individuals receiving outpatient mental health services.

Secondary Use

No secondary uses of the GAF were discovered.

Measurement of Occupational Performance

The GAF only tangentially addresses occupational performance. A literature search found no studies linking GAF ratings to employability or occupational performance except for the study cited previously.[3]

Additional Findings

The modified GAF is quick to rate, taking less than five minutes. It must be completed by someone, therapist, nurse, counselor, psychiatrist, etc., familiar with the individual, and therefore there is no self-report bias.

Availability

The modified GAF can be obtained from the cited references.

References

1. Endicott J, Spitzer RI, Fleiss JL, Cohen J. The Global Assessment Scale: a procedure for measuring overall severity of psychiatric disturbance. Arch Gen Psych 1976; 33:766-771.
2. Hall RC. Global Assessment of Functioning: a modified scale. Psychosomatics 1995; 36:267-275.
3. Patterson DA, Lee M. Field trial of the Global Assessment Scale--Modified. Am J Psych 1995;152:1386-1388.

Instrument/method: Index of Independence in ADL

Primary Purpose and Description

The Index of Independence in Activities of Daily Living1 developed for objective assessment of functioning of chronically ill, disabled, and aging populations.[1] The Index is useful as both a clinical assessment and a measure of rehabilitation progress. The Index contains Likert-scale items related to independence in bathing, dressing, toileting, transferring, continence, and feeding. Depending on the determined level of independence, the rated individual is assigned a grade of A to G, from complete functional independence to complete dependence in all areas. The Index is completed either through interviews or by an expert rater.

Validation Methods and Samples

The original Index was validated on a sample of over 1,000 elderly patients. Reliability and validity measures were high. A coefficient of scalability of .88 was achieved.[2]

Secondary Use

The Index of ADL was developed as an assessment of elderly and chronically ill populations. Subsequent research has included individuals with arthritis, CVA, brain injury, and other medical and health problems.[3]

Measurement of Occupational Performance

The Index of ADL contains no items related to employment or occupational performance. No research was found that related performance on the Index to return to work or occupational performance.

Additional Findings

The Index is brief, requiring from 10 to 30 minutes to complete. The Index has been translated into Swedish and validated with Swedish patients. No evidence of computer applications were found.

Availability

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Cleveland, Ohio

References

1. Katz S, Downs TD, Cash HR, Grotz RC. Progress in development of the Index of ADL. The Gerontologist 1970;1: 20-30.
2. Katz S, Ford AB, Moskowitz RW, Jackson BA, Jaffe MW. Studies of illness in the aged: the Index of ADL: A standardized measure of biological and psychosocial function. JAMA 1963; 185:914-919.
3. Hinderer SR, Hinderer KA. Quantitative methods of evaluation. In: DeLisa JA, Gans, BM, eds. Rehabilitation medicine: principles and practices. Philadelphia: J.B. Lippincott, 1993.

Instrument/method: Index of Well-Being (IWB)

Primary Purpose and Description

The Index of Well-Being (IWB) was developed as a global measure of health status.[1] Thegoal of development was to include all levels of function and symptoms or problem complexes, a clearly defined relation to morbidity, and consumer ratings of disability resulting from functional health impairments. Well-being, as defined by the developers, relates to quality of life as it relates to health status and problems. The IWB is comprised of three separate functional scales, mobility, physical activity, and social activity, and a checklist of symptoms and problem complexes. Items on the three scales were weighted according to consumer preference or value to general well-being. The IWB scoring returns a functional level of 0 (dead) to 100 (physically and socially active). The IWB requires a trained administrator to complete.

Validation Methods and Samples

In 1974, the developers of the IWB utilized a probability sample of 867 individuals of varying health and physical status living in the San Diego area for instrument validation activities.[2] The consumer preference weightings were highly reliable ($r=0.91$) and generalized across socioeconomic groups. The IWB levels of functioning were highly predictive of actual health status from individual case descriptions ($R^2>0.96$). IWB level correlated significantly with other objective measures of health status, such as number of physician contacts, number of chronic conditions, and age.

Secondary Use

The IWB was developed as a global measure of health-related quality of life applicable to any individual. A literature search found a number of studies relating IWB levels of health functioning to disability across a multitude of health impairment populations, such as major trauma, physical disability, and other health impairments.[3]

Measurement of Occupational Performance

The social activity scale of the IWB contains a number of items related to employability and occupational performance. No research was found which validated these items or the IWB as a whole in these areas.

Additional Findings

No estimates of time needed to complete the IWB were found. A reasonable time frame for completing the three scales and the symptom checklist would be between 30 and 60 minutes. Because the IWB assesses observable behaviors and symptoms in recent, specific days, its developers have attempted to bypass problems associated with most self-rating scales or expert reporter scales.

References

1. Fanshel S, Bush JW. A health status index and its application to health services. Oper Res 1970; 18:1021.
2. Kaplan RM, Bush JW, Berry CC. Health status: types of validity and the Index of Well-being. Health Serv Res 1976; 31:478-507.
3. Liang MH, Fossel AH, Larson MG. Comparisons of five health status instruments for orthopedic evaluation. Med Care 1990; 28:632-642.

Instrument/method: Katz Adjustment Scales (KAS)

Primary Purpose and Description

The Katz Adjustment Scales were developed to assess levels of personal and social adjustment. The KAS is actually comprised of ten scales. However, two are used most frequently in assessment of disability:

1. Relatives' Reporting of Symptoms and Social Behavior (KAS-R1) - This scale contains 127 items related to behavioral manifestations of adjustment and maladjustment which are scored on a Likert scale from 1 to 4, representing the levels almost never, sometimes, often, and almost always.

2. Self-Rating of Symptom Discomfort (KAS-S1). This scale presents 55 items which describe somatic, mood, and psychoneurotic symptoms. Items are scored from 1 to 4, from not at all, sometimes, frequently, and always.

The preferred method of assessment is to administer both instruments to the individual and a trusted significant other for comparison and verification.[1]

Validation Methods and Samples

The original validation samples for the R1 and S1 forms were 30 individuals with psychiatric diagnoses, including schizophrenia or psychosis, and a relative respondent. The two scales showed high discriminant validity in correlations with clinical judgment. Correlations between relatives' ratings and self ratings were also significant.

Secondary Use

Although designed for assessment of adjustment of individuals with psychiatric disabilities, the Katz scales have also been shown to be useful and valid in assessing the degree of disability and course of recovery for individuals with traumatic brain injuries,2 spinal cord injuries,3 epilepsy,4 and other groups.

Measurement of Occupational Performance

Although the KAS-R1 and KAS-S1 forms do not contain items related to occupational performance, the KAS scales have shown predictive value regarding return to work following disability. For example, Prigatano et al[5] studied individuals with severe brain injury who returned to work along with a comparison group of those who failed to return to work. Among other findings, they reported that several of the KAS subscale scores differentiated the two groups.

Additional Findings

When used in combination, the KAS-R1 provides verification of self-reported complaints from the KAS-S1 assessment. The KAS scales have been translated into a number of languages, but no computer adaptations were found. Estimates of time to complete the KAS scales were not found, but a conservative time estimate to complete the KAS-R1 and KAS-S1 forms would be 30 minutes or less.

Availability

The KAS scales can be obtained through:

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Benjamin Rose Hospital
2073 Abingdon Road
Cleveland, Ohio

References

1. Katz MM, Lyerly SB. Methods for measuring adjustment and social behavior in the community. I. rationale, description, discriminative validity and scale development. Psychol Rep 1963; 13:503-535.
2. Goran DA, Fabiano RJ. The scaling of the Katz Adjustment Scale in a traumatic brain injury rehabilitation sample. Brain Inj 1993; 7:219-229.
3. Stambrook M, MacBeath S, Moore AD, Peters LC, Zubek E, Friesen IC. Social role functioning following spinal cord injury. Paraplegia 1991; 29:318-323.
4. Vickrey BG, Hays RD, Brook RH, Rausch R. Reliability and validity of the Katz Adjustment Scales in an epilepsy sample. Qual Life Res 1992; 1:63-72.
5. Prigatano GP, Klonoff PS, O'Brien KP et al. Neuropsychological rehabilitation after closed head injury in young adults. J Neurol Neurosurg Psych 1984; 47:505- 513.

Instrument/method: Mini-Mental State Examination (MMS)

Primary Purpose and Description

The Mini-Mental State Examination (MMS) is one of the most widely used brief instruments to screen for cognitive impairment or dementia.[1] The test consists of 11 questions or exercises divided into two sections that assess verbal functions, memory, attention, orientation, and constructional ability. The first section requires vocal responses and the second section tests ability to follow verbal and written instructions, including copying a complex polygon similar to a Bender-Gestalt Figure. A perfect score is 30 with 24 and below being the cutoff to distinguish cognitively impaired from non-impaired patients. The test can be administered by clinical or lay personnel with minimal training.

Validation Methods and Samples

The MMS was originally validated with patients with dementia syndromes, affective disorders, schizophrenia, personality disorders or other psychiatric diagnoses and a normal elderly comparison group. Test-retest for the MMS over a 24-hour period was high for the same examiner (.89) and for different examiners (.83).[1] Inter-rater reliability has not fallen below .82.[2] High internal consistency of the MMS has been reported.[3] Concurrent validity was determined by correlating the MMS with the Wechsler Adult Intelligence Scale Verbal IQ scores (.78) and Performance IQ scores (.66).[1] The MMS also discriminated among groups of psychiatric patients differentiated in the severity of cognitive impairment by psychiatrist diagnoses, and the MMS was also capable of discriminating between patients with cognitive disturbance from normals.[4] High specificity and sensitivity were reported in another study.[2] Excellent criterion validity of the MMS has also been found.[3] It is most effective in discriminating patients with moderate to severe cognitive deficits from controls. The MMS is less successful in differentiating mildly impaired patients.[5,6] The Modified Mini-Mental State Examination (3MS) was found to have similar reliability and classification accuracy as the original version in a sample of geriatric stroke patients.[7] The 3MS was significantly better at predicting functional outcome (Functional Independence Measure) than the original MMS in demonstrating superior criterion validity. The original MMS also indicated a high false negative rate in some studies.[8]

Secondary Use

The MMS has been used in research to distinguish patients with Huntington's Disease from those with Alzheimers.[9] A significant relationship was also found between the MMS and event-related potentials in a sample of demented elderly patients.[10]

Additional Findings

The test is not self-administered and takes about 5 to 10 minutes to complete. The MMS is not computer-storable and cannot be interpreted by a computer. The test is widely available, non-intrusive, and has been translated into a number of languages.

References

1. Folstein MF, Folstein SE, McHugh PR: Mini-mental state: A practical method for grading the cognitive state of patients for the clinician. J Psychiatry Res 1975; 12:189-198.
2. Anthony JC, LeResche L, Niaz U, VonKorff MR, Folstein MF: Limits of the "mini-mental state" as a screening test for dementia and delirium among hospital patients. Psychol Med 1982; 12:397-408.
3. Foreman MD: Reliability and validity of mental status questionnaires in elderly hospitalized patients. Nurs Res 1987; 36:216-220.
4. Filley CM, Davis KA, Schmitz SP: Neuropsychological performance and magnetic resonance imaging in Alzheimer's disease and normal aging. Neuropsychiatry, Neuropsychology, and Behavioral Neurology 1989; 2:81-91.
5. Knight RG. The neuropsychology of degenerative brain diseases. Hillsdale, NJ: Lawrence Erlbaum, 1992.
6. Yazdanfar DJ: Assessing mental status of the cognitively impaired elderly. J Gerontological Nurs 1990; 16: 32-36.
7. Grace J, Nadler JD, White DA, Guilmette TJ, Giuliano AJ, Monsch AU, Snow MG: Folstein vs modified mini-mental state examination in geriatric stroke. Arch Neurol 1995; 52: 477-484.
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9. Brandt J, Folstein SE, Folstein MF: Differential cognitive impairment In Alzheimer's disease and Huntington's disease. Ann Neurol 1988; 23: 555-561.
10. Brown WS, Marsh JT, LaRue A: Event-related potentials in psychiatry: Differentiating depression and dementia in the elderly. Bulletin of the Los Angeles Neurological Society 1982; 47:91-107.

Instrument/method: Multiperspective Multidimensional Pain Assessment Protocol (MMPAP)

Primary Purpose and Description

The Multiperspective Multidimensional Pain Assessment Protocol (MMPAP) is a recently developed pain assessment protocol, which uses both subjective information and objective medical evidence. The MMPAP encompasses all domains related to pain and functional performance previously assessed by varied means. When pain becomes chronic it intertwines with the many dimensions of a patient's life, increasing the complexity of the patient's perception of the pain, and subsequently the prescribed treatment. Both the patient's perspective and the physician's perspective are crucial in the assessment of these multiple dimensions, creating a fundamental need for a valid and reliable, multiperspective, multidimensional pain assessment tool.

The MMPAP was originally developed by extensive literature review, and was further developed by two expert panel round table reviews. Data was collected from a variety of perspectives: The patient supplied basic demographic and vocational information on an initial referral form, and completed a subjective assessment instrument containing pain information, both historical and at the time of completion. Two physicians performed a physical examination and completed a form containing both subjective and objective information plus treatment history.

Validation Methods and Samples

Following the initial development of the MMPAP, the protocol was then validated and tested for reliability. The comprehensive list of forced choice items was initially pilot tested with 67 patients reporting pain for at least six months. Those components that could not be consistently and repeatedly assessed were dropped from the battery.

The MMPAP was validated using a randomized regional sample of 651 outpatients complaining of chronic pain. Each MMPAP consisted of physical examinations by two physicians, and the participant's subjective self-report. The MMPAP proved to be a reliable and valid tool which may assist in the assessment of chronic pain when two physicians independently assess the patient and this information is combined with the patient's self-reported pain perceptions. Test-retest and inter-rater reliability analyses confirmed the data collected with the MMPAP was repeatable. A combination of concurrent comparisons with previously validated instruments, construct corroboration with factor analysis, and internal consistency analyses ascertained the validity of the MMPAP.

Secondary Use

The MMPAP is designed to be used across disability groups for individual assessment of pain and functional performance. Secondarily the battery has been used in research to predict return to work of individuals who have applied for Social Security disability benefits either wholly or partially due to pain. The introduction of this standardized protocol will assist in standardizing assessments of patients with chronic pain. The MMPAP has potential as a diagnostic tool, a measure of treatment effectiveness, and as a tool to compare various pain treatment center outcomes.

Measurement of Occupational Performance

The MMPAP is a direct measure of functional skills used in employment settings. It also includes a descriptive section of employment history. The instrument has been shown to have predictive value for future employment status of individuals who have applied for Social Security disability benefits either wholly or partially due to pain.[2]

Additional Findings

The MMPAP is presently being adapted to computer use. Additionally, a research version has been translated into Spanish. The MMPAP is not excessively intrusive, but does require two physical examinations and completion of a questionnaire.

References

1. Rucker KS, Metzler HM. Standardization of Chronic Pain Assessment: A Multiperspective Approach. In Advances in Physical Medicine and Rehabilitation Research, Eds. Wehman P, Cifu DX. Department of Physical Medicine and Rehabilitation, Virginia Commonwealth University Medical College of Virginia. 1995.
2. Rucker KS, Metzler HM. Predicting subsequent employment status of SSA disability applicants with chronic pain. Clin J Pain 1995; 11:22-35.

Instrument/method: Neurobehavioral Rating Scale (NBRS)

Primary Purpose and Description

The Neurobehavioral Rating Scale (NBRS) is a 27-item modification of the Brief Psychiatric Rating Scale and was designed for evaluating the psychosocial consequences of head trauma.[1] Administration of the NBRS requires a trained clinical examiner. Item ratings are endorsed on a seven-point scale from "Not present" to "extremely severe."

Validation Methods and Samples

The orginal validation sample of the NBRS was a population of closed head injury patients varying the degree of severity and chronicity of injury. The NBRS has shown high inter-rater reliability and test-retest reliability (one-week) coefficients.[2] A French version of the NBRS demonstrated moderate inter-rater reliability.[3] Factor analysis has revealed four factors with two of the factors (Metacognition and Language) discriminating between mildly injured groups and patients with moderate to severe head injuries.1 Factors scores were also able to differentiate patients with frontal lobe lesions from patients without such lesions.

Measurement of Occupational Performance

Our review did not yield any research on the NBRS and occupational performance.

Additional Findings

The test is not computer-scorable and cannot be interpreted by a computer. Detailed guidelines for administration are provided in a manual.[4]

References

1. Levin HS, High WM, Goethe, KE, Sisson, RA, Overall JE, Rhoades HM, Eisenberg HM, Kalisky Z, Gray HE; The neurobehavioral rating scale: Assessment of the behavioral sequelae of head injury by the clinician. J Neurol Neurosurg Psychiatry 1987; 50:183-193.
2. Corrigan JD, Dickerson J, Fisher E, Meyer P; the neurobehavioral rating scale: Replication in an acute, inpatient rehabilitation setting. Brain Injury 1990; 4:215-222.
3. Levin HS Mazaux JM, Vanier M: Evaluation des troubles neuropsychologiques et comportementaux des traumtises craniens par le clinicien: proposition d'une echelle neurocomprtementale et premiers resultats de sa version francaise. Annales de readaptation et de Medecine physique 1990; 33:35-40.
4. Levin HS, Overall JE, Goethe KE. Guidelines for using the neurobehavioral rating scale. Unpublished manuscript. Galveston, TX: Division of Neurosurgery, University of Texas Medical Branch.

Instrument/method: Neuropsychological Impairment Scale Revised (NIS)

Primary Purpose and Description

The revised Neuropsychological Impairment Scale (NIS) is a self-reporting neuropsychological screening instrument.[1] The revised NIS attempts to include a measure of affective distress within the more general measure of cognitive status. The NIS includes 95 items: 80 measure neuropsychological symptoms, 10 measure affective disturbance, and 5 measure test-taking attitudes (LIE scale). Items are endorsed on a 5-point scale from 0 (not at all) to 4 (extremely). The 80 neuropsychological items yield a Global Measure of Impairment (GMI), which is the best indicator of cognitive impairment among the NIS summary scores. The Subjective Distortion Index provides an estimation of the degree to which affective disturbance may confound a patient's responses.

Validation Methods and Sample

The original 50-item NIS was found to have strong test-retest reliability and to be able to discriminate between psychiatric and neurologic patients.[2] Concurrent validity of the original NIS was evidenced in correlations with performance measures sensitive to cognitive impairment, including the WAIS Digit Symbol subscale, the Trail Making Test (Parts A and B), and the Halstead Impairment Index.[2,3,4] The normative sample for the revised NIS consisted of 1,000 community-dwelling adults and a clinical sample of 300 neuropsychiatric patients with various diagnoses. High test-retest reliability has been reported for patients scores on the NIS at nine weeks.[1] Concurrent validity of the revised NIS included significant correlations with the Halstead-Reitan Impairment Index, WAIS-R Performance and Full Scale IQ scores, and Wechsler Memory Scale - Revised General Memory Index.[1] The GMI is not significantly correlated with the LIE scale, indicating that the NIS is not invalidated by defensiveness.

Measurement of Occupational Performance

The NIS does not directly measure employability or work performance.

Additional Findings

No evidence of computer scoring or interpretation was found. The NIS is widely available and non-intrusive.

References

1. O'Donnell WE, De Soto CB, De Soto JL: Validity and reliability of the revised neuropsychological impairment scale (NIS). J Clin Psychology 1993; 49:372-382.
2. O'Donnell WE, Reynolds DM, De Soto CB: Validity and reliability of the neuropsychological impairment scale (NIS). J Clin Psychology 1984; 40:549-553.
3. O'Donnell WE, Reynolds DM, De Soto CB: Neuropsychological impairment scale (NIS): Initial validation study. J Clin Psychology 1983; 39:746-748.
4. O'Donnell WE, De Soto CB, Reynolds DM: Sensitivity and specificity of the neuropsychological impairment scale (NIS). J Clin Psychology 1984; 40:553-555.

Instrument/method: Nottingham Health Profile (NHP)

Primary Purpose and Description

The NHP[1] is described as a short and simple standardized instrument for measuring perceived health-related quality of life. It provides a measure of the perceptions of patients and can be regarded as and accurate guide to the efficacy of health care in affecting how people feel. The instrument consists of 2 parts. Part I measures subjective health status by asking for yes/no responses to 38 simple statements relating to 6 dimensions of social functioning (energy, pain, emotional reactions, sleep, social isolation and physical mobility. Part II relates to 7 areas of task performance most affected by health (occupation, ability to perform tasks around the home, personal relationships, sex life, social life, hobbies, and holidays. Responses to Part II, considered to be of limited use, are not weighted; they are just a count of affirmative responses used as a summary statistic. The NHP was developed in the UK by a team from the Department of Community Health at Nottingham University School of Medicine.

Validation Methods and Samples

The NHP has been tested for face, content and criterion validity with diverse groups of people. Selected groups which have been used to test reliability and validity include elderly people who are physiologically "fit" and those with chronic illnesses, men who could be presumed to be in good health (i.e. fireman and mine rescue workers), and pregnant women. Studies indicate that the NHP is a valid and reliable indicator of subjective health status in physical, social and emotional areas.

Secondary Use

The usefulness of the NHP as a survey tool has been used to examine social class differentials in perceived health. Results suggested a greater vulnerability to social and economic stresses among younger people in lower socioeconomic groups and some adaptation and resignation occurring with people who are middle-aged.

The self-reporting NHP was compared with 2 physician-reporting instruments - the New York Heart Association classification and the Karnofsky Performance Status Scale. Patient's self-reported health status as measured by the NHP was found to be consistent with the physician ratings of the other 2 instruments.[2]

The NHP has been shown to be a useful indicator of quality of life that can also be used as a prognostic indicator of post-heart transplant survival. Other populations on which it is being used as an outcome measure include: stroke, myocardial infarction, cancer, and multiple sclerosis.[3]

Measurement of Occupational Performance

Only one reference was found which related the NHP to occupational performance. It was found that days of absence from work through ill-health were significantly related to profile scores. There was no indication that the NHP is used as a predictive tool in this area.

Additional Findings

The NHP is considered to be an inexpensive, quick and easy means of assessing those experiences and effects on daily life that are known to be associated with the demand for services. It can be administered by interview or by mail, and it makes relatively small demands on patient time and effort.

Availability

The NHP is available from:

Dr. J. McEwen
King's College Hospital School
Department of Community Medicine
Denmark Hill
London SE5 8RX United Kingdom

References

1. Hunt M, McEwen, J, McKenna P. Measuring health status: a new tool for clinicians and epidemiologists. J of the Royal Col of Gen Pract 1985, April:185-188.
2. O'Brien BJ, Buxton MJ, Patterson DL. Relationship between functional status and health-related quality-of-life after myocardial infarction. Medical Care 1993, 31:950-955.
3. O'Brien BJ, Buxton MJ, Ferguson BA. Measuring the effects of heart transplant programmes: Quality of life data and their relationship to survival analysis. J Chron Dis 1987, 40:137S-153S.

Instrument/method: Pain Disability Index (PDI)

Primary Purpose and Description

The Pain Disability Index (PDI) is a seven-item self-administered global rating scale of level of disability due to pain. The PDI requests patients to rate the items on a scale of 0 (no disability) to 10 (total disability). The items rated include family and home responsibilities, recreation, social activity, occupation, sexual behavior, self-care, and life support activity. The seven scores are summed for a total disability score. The PDI has been shown to differentiate between patients who had recently undergone back surgery and patients with low back pain who were able to continue working.[1]

Validation Methods and Samples

The PDI has been shown to have high interrater and test-retest reliability.[2] In a validation study with 108 patients,[3] the PDI showed high internal consistency reliability (alpha=.86). Factor analysis of the items revealed two factors, engagement in voluntary activities (59.3% of variance) and engagement in activities of daily living and survival (14.3% of variance). A second study[4] found high correlation between PDI scores and the Oswestry Low Back Pain Disability Questionnaire, but the PDI was more sensitive in discriminating between levels of functional status and functional status changes.

Secondary Use

The PDI has been used extensively as a measure of functional status change and clinical improvement in pain patients.

Measurement of Occupational Performance

The PDI contains one item which requests a self-rating of pain on occupational performance. No research was found which directly established predictive validity for return to work.

Additional Findings

The PDI is a self-report measure; it has no safeguards for false responses.

Availability

The PDI can be duplicated from the first reference.

References

1. Pollard CA. Preliminary validity study of the Pain Disability Index. Percept Mot Skils 1984; 59:974.

2. Gronblad M, Hupli M, Wennerstrand P et al. Intercorrelation and test-retest reliability of the Pain Disability Index (PDI) and the Oswestry Disability Questionnaire (ODQ) and their correlation with pain intensity in low back pain patients. Clin J Pain 1993; 9(3)189-195,
3. Tait RC, Pollard CA, Margolis RB, Duckro PN, Krause SJ. Pain Disability Index: psychometric and validity data. Arch Phys Med Rehabil 1987; 68:438-441.
4. Strong J, Ashton R, Large RG. Function and the patient with low back pain. Clin J Pain 994;10(3):191-196.

Instrument/method: Patient Evaluation Conference System (PECS)

Primary Purpose and Description

The Patient Evaluation and Conference System (PECS) was developed as a measure of functional performance, disability status, and rehabilitation outcomes. The PECS rating form is divided into medical and physical restoration items (front) and psychological, social, and vocational items (back). The PECS has a total of 79 items, all of which are rated by a physician or other medical personnel on a 0 to 7 scale in ascending order of dependence to independence. Information from completing the PECS can be obtained either from medical records, knowledgeable informant, or observation.

Validation Methods and Samples

The PECS was standardized on a sample of 125 inpatients at a medical rehabilitation center with brain injuries, spinal cord injuries, chronic pain, and other musculoskeletal disabilities.[1] Test-retest reliability correlations for the subscales ranged from 0.68 to 0.80. The PECS showed sensitivity to gain during the inpatient rehabilitation stay when compared to achievement of rehabilitation goals. In later analyses, PECS scores have been found to correlate strongly with such standard measures as the Functional Independence Measure (FIM),[2] and to have discriminative validity related to level of care.[3]

Secondary Use

The PECS assessment is designed to be utilized across disability groups, but specifically for individuals receiving rehabilitation services. In addition to the musculoskeletal disorders in the validation sample, the PECS has been utilized as a measure of clinical gain for persons with other impairments, such as stroke, heart disease, and brain injury.

Measurement of Occupational Performance

The PECS contains items requesting the individual's need for vocational rehabilitation services. In a study of individuals with brain injuries, Rao and Kilgore[4] found that PECS total score and PECS Cognition scores were the most accurate from a number of assessment instruments as predictors of return to work.

Additional Findings

Time estimates for PECS completion were not found. It is likely that the instrument could be completed in 30 minutes or less for most individuals. There are no control mechanisms for assessing validity of patient self-report data. No evidence of computer adaptations or translations were found.

Availability

PECS forms are available from:

Richard F. Harvey, MD
Department of Rehabilitation Medicine
University of Wisconsin
Madison, WI 53792

References

1. Harvey RF, Jellinek HM. Functional performance assessment: a program approach. Arch Phys Med Rehabil 1981; 62:456-461.
2. Fisher WP, Harvey RF, Taylor P, Kilgore KM, Kelly CK. Rehabits: a common language of functional assessment. Arch Phys Med Rehabil 1995; 76:113-122.
3. Harvey RF, Silverstein, Venzon MA et auditory learning,. Applying psychometric criteria to functional assessment in medical rehabilitation: Construct validity and predicting level of care. Arch Phys Med Rehabil 1992; 73:887-892.
4. Rao N, Kilgore KM. Predicting return to work in traumatic brain injury using assessment scales. Arch Phys Med Rehabil 1992; 73:911-916.

Instrument/method: Physical Work Performance Evaluation (PWPE)

Primary Purpose and Description

The Physical Work Performance Evaluation (PWPE) is a series of tests of an individual's ability to perform the physical demands of work. There are 36 separate tests that evaluate such capacities as dynamic strength, position tolerance, mobility, balance, endurance and coordination, and fine motor skills, including the 20 physical demands of work as defined by the Dictionary of Occupational Titles. The tests are designed to enhance the consistency and objectivity in judgements to determine a worker's maximum safe physical working ability. A training manual for administration is available. Because the PWPE rates standardized physical demands, individuals can be assessed on their physical capacity to perform specific job types, or the results of full testing can be used for job exploration activities, job accommodations, or vocational rehabilitation, as well as disability determination. The testing format also allows for rater assessment of subject cooperation.

Validation Methods and Samples

Reliability analyses[1] were conducted on a sample of 50 subjects with musculoskeletal disabilities due to injury, recruited from an outpatient rheumatology clinic at the University of Alabama-Birmingham. Inter-rater reliability agreement for all tests of maximum effort and subject cooperation were significantly positively related. Correlation of PWPE prediction and actual work levels ranged from .41 to .55, all significant. Correlation of overall level of work with level of physical work performance was .83. Only 14% to 18% of those evaluated were working above the level predicted by the PWPE. In an as-yet-unpublished study,[2] the predictive validity of the PWPE was assessed using as the criterion variable actual work status at 3 and 6 months following completion of a work hardening program. The PWPE predicted actual work status with 87% accuracy at both time points.

Secondary Use

The PWPE is a recently-developed assessment of physical capacity to perform work tasks. No secondary uses were identified.

Measurement of Occupational Performance

The validation analyses described above indicate that the PWPE accurately and reliably predicts safe work levels of individuals who have sustained a musculoskeletal injury.

Additional Findings

The PWPE requires capital costs of $2000 for materials such as shelving, heart rate monitor, boxes, stopwatch, etc.; the estimated cost of conducting the assessment is

approximately $400 to $500. A complete test protocol requires approximately 3.5 to 4.5 hours to complete. The PWPE includes some attention to assessment of maximal effort, including judgment of the administrator and taking of physical data from the individual being examined (i.e., heart rate). The developer warns that PWPE testing should be carried out by an occupational or physical therapist or other trained individual, as some of the maximal effort testing can lead to pain or aggravation work injuries. The PWPE includes analysis software that returns a summary of test performance, assessment of effort, matching of physical work performance to essential job tasks (if assessing ability to return to a specific job), prediction of ability to complete an 8-hour work day, and a prediction of overall level of safe work performance.

Availability

The PWPE is available from:

Deborah E. Lechner, PT, MS
ErgoScience
3929 Glenwood Avenue
Birmingham, AL 35222

References

1. Lechner DE, Jackson JR, Roth DL, Straaton KV. Reliability and validity of a newly developed test of physical work performance. J Occup Med 1994; 36:997-1004.
2. Lechner DE, Sheffield GL, Page JJ, Jackson JR. Predictive validity of a functional capacity evaluation: the Physical Work Performance Evaluation, in progress.

Instrument/method: Preliminary Diagnostic Questionnaire (PDQ)

Primary Purpose and Description

The Preliminary Diagnostic Questionnaire (PDQ)[1] was developed to provide a global assessment of the functional capacities of individuals with disabilities in relation to employment. The PDQ contains eight subscales related to work information (17 items), preliminary estimate of learning (30 items), psychomotor skills (9 items), reading ability (a reading passage with 18 test items), importance of work to the individual (9 items), personal independence (29 items), internality or locus of control (15 items), and emotional functioning (20 items). Scores from the subscales are used to create a PDQ profile with scale scores computed in stanines. The PDQ takes approximately one hour to administer by certified administrators, typically vocational rehabilitation counselors who are trained via print and video modules, followed by review by the PDQ developers of a minimum of five completed instruments. The PDQ may be used in individual program planning or for assessment of rehabilitation gain.

Validation Methods and Samples

The PDQ was validated with 2,972 applicants to state vocational rehabilitation agencies nationwide.[2,3] The validation sample included all major disability classifications and had a mean age of 30 years. Test-retest reliability correlations on most of the subscales were high (at least .75) with the exception of the internality subscale (.47). Internal consistency Cronbach's alpha coefficients ranged from .69 to .90. Criterion-rated validity based on VR case closure at minimum wage or greater, with subscales differentiating groups to a statistically significant degree. Construct validity was assessed via correlation with the General Aptitude Test Battery (GATB), the Wechsler Adult Intelligence Scale (WAIS) and the Wide Range Achievement Test (WRAT). Significant correlations were reported for seven of the eight PDQ subscales.

Secondary Use

The PDQ is designed to be used across disability groups for individual assessment of needs and progress. No secondary uses were found.

Measurement of Occupational Performance

The PDQ is a direct measure of functional employment skills. The instrument has been shown to have predictive value for VR clients closed successfully in competitive employment at or above minimum wage.[2,3]

Additional Findings

The PDQ has been adapted to computer use; however, no evidence of translation to other languages was found. The PDQ requires approximately one hour to complete, but is not excessively intrusive.

References

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Instrument/method: PULSES Profile

Primary Purpose and Description

The PULSES Profile was originally developed to measure functional independence in the activities of daily living of a chronically ill and elderly, instituionalized population.[1,2] The profile was used to evaluate patient progress and predict potential for rehabilitation. The acronym PULSES represents six areas of possible impairment that are assessed: physical condition; upper limb functions; lower limb functions; sensory components; excretory functions; and mental and emotional status. Four levels of impairment (normal, mild, moderately severe, severe) are specified with respect to each of the six areas. A corresponding score for level of impairment in each area ranges from 1 (normal) to 4 (severe). Administering the profile requires clinician ratings following an examination or ratings by trained nurses using patient medical records. The PULSES assesses similar dimensions as the Barthel Index with the addition of communication and psychosocial aspects of functioning.

Validation Methods and Samples

The original validation sample of the PULSES included 307 severely disabled patients at comprehensive medical rehabilitation centers around the United States.[3] High test-retest reliability (.87) and inter-rater reliability (.95) were reported for this original study. Concurrent validity was indicated in the significant correlation between the PULSES and Barthel Index scores. The PULSES was also able to discriminate between post-discharge patients of rehabilitation units who returned home, were referred for acute care, or were referred to long-term institutions.[3] The PULSES profile was also sensitive to change in funtional status between admission and discharge.

Secondary Use

A modified version called the BULHEEMS was developed to screen for diability in the general population.[4] The PULSES was also included along with the Barthel and ESCROW scales in the Long-Range Evaluation System.[5]

Measurement of Occupational Performance

One study of 118 disabled persons found total PULSES scores at discharge were correlated with their final vocational status.[6]

References

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assessment in rehabiliation medicine. Baltimore: Williams & wilkins, 1984:99-121.
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Instrument/method: Rapid Disability Rating Scale-2 (RDRS-2)

Primary Purpose and Description

The Rapid Disability Rating Scale (RDRS) was originally published in 1967 as a measure of quick assessment of disability for elderly persons. RDRS was revised in 1982 by adding items (total of 18) and Likert-scale options increased from three to four for each item.[1] The 18 items are arranged in three factors: activities of daily living (ADLs), disability (including communication, hearing, sight, and others), and special problems (including confusion, uncooperativeness, and depression). The RDRS-2 can be completed by anyone who is familiar with the individual.

Validation Methods and Samples

The RDRS-2 was validated in 1982. Inter-rater reliability coefficients on a sample of 100 ranged from .62 to .98 across the three factors. Test-retest coefficients on 50 patients tested at three-day intervals ranged from .58 to .96. Predictive validity was established through prediction of mortality of 845 individuals.

Secondary Use

Although primarily developed to assess degree of disability of elderly persons, the RDRS-2 has also been used as a measure of change of function of persons with various types of disabilities, including mental illness, health impairments, and brain injuries.[2]

Measurement of Occupational Performance

The RDRS-2 contains no items related to employability or occupational performance. A literature search yielded no research related to the predictive value of the RDRS-2 in return to work or occupational performance.

Additional Findings

The RDRS-2 is a quick checklist and takes only a few minutes to complete, provided the individual completing the assessment is familiar with the disabled person. There are no safeguards in the RDRS-2 for verification of responses or effort.

Availability

The RDRS-2 is available from:

Margaret W. Linn, PhD
Director, Social Services Research (151)
Veterans Administration Medical Center
1201 N.W. 16th Street
Miami, FL 33125

References

1. Linn MW, Linn BS. The Rapid Disability Rating Scale-2. J Am Geriatr Soc 1982; 30:378-382.
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Instrument/method: Rehabilitation Activities Profile (RAP)

Primary Purpose and Description

The Rehabilitation Activities Profile (RAP) is a recently-developed assessment of disability in the domains of communication, mobility, personal care, occupation, and relationships. The instrument is based on the International Classification of Impairments, Disabilities, and Handicaps (ICIDH) and is constructed as a tool for rehabilitation teams in planning, delivering and evaluating services. Within the RAP's five domains are 21 items, with each item further leading to 71 sub-items, all of which are Likert-scaled. The sub-items elicit information on, first, the extent of the impairment and second, the individual's perceived problems related to the impairment. The RAP is completed by a physician or other professional during an interview with the patient.

Validation Methods and Samples

The RAP was validated at five hospital or rehabilitation clinic settings with 10 administrators and 273 individuals with an array of disabling conditions.[2] Domain inter-rater reliability weighted kappa values for severity grading exceeded .84, and intra-rater agreements exceeded 81%. For perceived problems, these values were .91 and 86%, respectively. A later study[3] with a sample of stroke patients found high correlation of the RAP with scores on the Barthel Index and the Frenchay Activities Index.

Secondary Use

The RAP is designed to be a global measure of disability applicable across all ages and disability groups.

Measurement of Occupational Performance

The RAP contains four items and 14 sub-items within the Occupation domain. The items are (1) providing for meals (5 sub-items), (2) household activities (3 sub-items), (3) professional activities (4 sub-items) and leisure activities (2 sub-items). Because the RAP is a recently-developed instrument, no research was found which related RAP scores with occupational performance or return to work.

Additional Findings

The RAP is an interview instrument and therefore is quick and easy to administer, and has a low level of intrusiveness. There are no external verification mechanisms described in the literature.

Availability

The RAP interview form and administration manual are available from:

Frank Jelles
Free University Hospital
Department of Rehabilitation Medicine
P. O. Box 7057
1007 MB Amsterdam
The Netherlands

References

1. Van Bennekom CA, Jelles F, Lankhorst GJ. Rehabilitation Activities Profile: the ICIDH as a framework for a problem-oriented assessment method in rehabilitation medicine. Disabil Rehabil 1995; 17:169-175.
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Instrument/method: Shipley Institute of Living Scale

Primary Purpose and Description

The Shipley Institute of Living Scale is a paper-and-pencil test originally designed to identify mental deterioration in psychiatric patients.[1] It has become a more general screening test for brain dysfunction in various patient populations. The instrument is comprised of two subtests: a 40-item multiple-choice vocabulary subtest and a 20-item abstraction subtest. A revised scoring manual has been developed and norms were devised to account for age and education. The revised manual also allows the prediction of WAIS-R IQ scores from Shipley total scores and added an Abstraction scale to the Vocabulary scale.[2] The Shipley is an easily-administered paper-and-pencil test. Both the original and revised versions of the Shipley provide tables to compute mental age equivalents.

Validation Methods and Samples

The original normative group of the Shipley consisted of 1,046 normal students from fourth grade through college.[1] The Shipley has been able to discriminate between patients with cognitive impairments and normal controls. The revised normative sample included 290 psychiatric patients, though the population was not well-defined in publication.[2] Older studies of the Shipley suggested it was more effective at discriminating between certain neuropsychiatric patients than between organic and normal patients.[3]

Secondary Use

The Shipley has been used as a brief method for estimating a WAIS-R IQ score. Correlations between total Shipley scores and WAIS Full Scale IQ scores ranged from .73 to .90 across eight studies.[4] High correlations have been reported between the Shipley and the actual WAIS-R Full Scale IQ score, with the stronger correlations evident for patients with a sixth-grade reading level or above. One study found a .79 correlation between estimated scores on the Shipley and actual WAIS-R Full Scale IQ.[5] Another study found correlations between .30 and .45 between Shipley scores and Full Scale IQ scores.[6] The Shipley formula may under-estimate the IQ of bright subjects and over-estimate those of subjects below average in intelligence.[7] A recent line of research on the Shipley has focused on adult populations since much of the prior research has been with students.[8]

Additional Findings

The Shipley is widely-available and non-intrusive.

References

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Instrument/method: Short Portable Mental Status Questionnaire (SPMSQ)

Primary Purpose and Description

The Short Portable Mental Status Questionnaire (SPMSQ) is a 10-item mental status instrument for screening organic brain impairment.[1,2] Seven items assess orientation, two items ask for past and current presidents, and the last item tests concentration. The test was constructed to discriminate four levels of mental functioning: intact, mild impairment, moderate impairment, and severe impairment. A scoring system compensates for both education and race. A 3-item short form accounted for almost as much variance as the longer form in one study.[3]

Validation Methods and Samples

The SPMSQ was originally validated on a sample of 1,000 community dwelling elderly and disabled persons.[1] Test-retest reliability was .82 and .83 for two samples of elderly participants. Concurrent validity is reflected in a correlation of .84 between the SPMSQ and the Mental Status Questionnaire, a widely used tool for assessing mental status.[2,3] Strong correlations have been established between SPMSQ ratings of mental functioning and psychiatrists' diagnoses of instiutionalized elderly. Moderate correlations were found between the SPMSQ and the Bender-Gestalt Test, the Digit Span subscale of the Wechsler Adult Intelligence Scale, and the Basic Living Skills Assessment.[2] The SPMSQ demonstrated effectiveness in discriminating psychiatric patients with moderate to severe organic mental impairments from those patients with functional disorders. Like most brief screening tools, the SPMSQ is more reliable in identifying moderate to severe cognitive impairment than mild impairment. One study of elderly nursing home patients found the SPMSQ was not sensitive to functional capacity.[4] The scale does appear to reflect dementia progression.[5]

Additional Findings

The SPMSQ is widely available and non-intrusive.

References

1. Pfeiffer E: A short portable mental status questionnaire for the assessment of organic brain deficit in elderly patients. J Am Ger Soc 1975; 23:433-441.
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4. Winograd CH: Mental status tests and the capacity for self-care. J Am Geriatrics Society 1984; 32:49-55.
5. Berg G, Edwards DF, Danziger WL, Berg L: Longitudinal change in three brief assessments of SDAT. J Am Geriatrics Society 1987; 35:205-212.

Instrument/method: Sickness Impact Profile (SIP)

Primary Purpose and Description

The Sickness Impact Profile (SIP) was developed to measure perceived health status with a descriptive role for changes due to sickness. The SIP was intended to apply broadly across various populations and health problems and it has been widely used to measure quality of life from a patient's perspective.[1] The term "sickness" denotes the individual's own perception of the effect of an illness on daily activities in contrast to a professional opinion or diagnosis. Items focus on behaviors and changes in performance in the three dimensions of physical, psychosocial, and independent categories (i.e., work, recreation, sleep. etc.). The final version of the SIP consists of 136 items in the form of statements, such as "I have difficulty reasoning and solving problems."[2] The SIP can be administered as an interview by an examiner in 20 to 30 minutes or self-administered as a paper and pencil test.

Validation Methods and Samples

The validation sample of the final version of the SIP included a total sample of 1,108 members of a group practice and patients of a family medicine clinic. Data was gathered through several clinical trials.[2] Test-retest reliabilities were also high for both the structured interview (.97) and self-administered methods (.87). Internal consistency correlations were identical for both methods (.94). Moderate correlations have been reported between the SIP and clinician ratings of sickness and dysfunction, Katz's Index of Activities of Daily Living, and the National health Interview Survey questions on activity limitation.[2] All SIP subscales were able to distinguish head trauma patients and their relatives. The SIP has also been able to discriminate head trauma patients who had been in coma for a week or more from those whose consciousness was impaired less than an hour and patients with impaired consciousness between an hour and one week.[3] Construct, convergent, and discriminant validity of the SIP has been thoroughly developed.[2]

Secondary Use

The SIP has been used to study specific patient populations, such as arthritics, hip replacement patients, hyperthyroid patients, patients with pulmonary disease, and patients with mild cerebrovascular disease.[2,4,5]

Measurement of Occupational Performance

In a sample of 131 male closed head injury patients, the SIP predicted post-injury employment status.[6] The SIP has also been utilized in research on vocational status following severe lower extremity fractures.[7]

Additional Findings

The SIP has been adapted for use in England and called the Functional Limitations Profile.[8] A Spanish version of the SIP has also been developed.[9] A short 69-item version of the SIP has recently been developed.[10] Initial tests of internal consistency and stability of the short version affirm high reliability.[11]

References

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9. Badia X, Alonso J: Re-scaling the Spanish version of the sickness impact profile: An opportunity for the assessment of cross-cultural equivalence. J Clin Epidemiol 1995; 48:949-957.
10. de Bruin AF, Buys M, de Witte CP, Diederiks JP: The sickness impact profile: SIP68, a hort generic version. First evaluation of the reliability and reproducibility. J Clin Epidemiol 1994; 47:863-871.
11. de Bruin AF, Diederiks JP, de Witte CP, Stevens FC, Philipsen H: The development of a short version of the sickness impact profile. J Clin Epidemiol 1994; 47:407-418.

Instrument/method: UAB Pain Behavior Scale

Primary Purpose and Description

The UAB Pain Behavior Scale, developed at the University of Alabama at Birmingham, is designed to be a quick, quantifiable rating scale of disability due to chronic pain. The scale targets 10 behaviors, each of which contributes to the PDI total score. Ratings are given for the 10 behaviors based on the frequency at which the individual either shows symptoms of pain or complains of pain. These symptoms, including facial grimaces, mobility, body language, etc., are rated independently as either none noted (score of 0), occasional (1/2) or frequently (1). The PDI is scored through observation of the individual at specified time periods. The procedure takes approximately 5 minutes per person rated.

Validation Methods and Samples

Validation of the UAB Pain Behavior Scale[1] was accomplished with persons receiving in-patient treatment for pain. Inter-rater reliability estimates between three trained raters (a psychologist, nurse, and medical student) on a sample of 50 patients ranged from .94 to .96. Test-retest on two consecutive days was .89. For a second sample of 70 patients, the PDI validated clinical progress through a 2-week pain treatment program, with scores at admission averaging 5.4 and 3.2 at discharge.

Secondary Use

The UAB Pain Behavior Scale is designed to assess somatic complaints and behaviors associated with pain. No secondary uses were identified.

Measurement of Occupational Performance

In a recently published study in Sweden,[2] 103 individuals with chronic pain were assessed through a variety of formal and informal measures. The UAB Pain Behavior Scale predicted both return to work and duration of absenteeism as a result of chronic pain to significant levels, and was the best predictor for these variables.

Additional Findings

The UAB Pain Behavior Scale is an observational measure. Used properly, evaluees are unaware that they are being rated and therefore are less likely to exaggerate symptoms.

Availability

The UAB Pain Behavior Scale can be duplicated from the first reference, or through:

J. Scott Richards
Department of Rehabilitation Medicine
University of Alabama at Birmingham
1717 Sixth Avenue S
Birmingham, AL 35233

References

1. Richards JS, Neopmuceno C, Riles M, Suer Z. Assessing pain behavior: the UAB Pain Behavior Scale. Pain 1982; 14:393-398.
2. Ohlund C, Lindstrom I, Areskoug B, Eek C, Lars-Erik P, Nachemson A. Pain behavior in industrial subacute low back pain: Part I. Reliability: concurrent and predictive validity of pain behavior assessments. Pain 1994; 58:201-209.

Instrument/method: West Haven-Yale Multidimensional Pain Inventory (MPI)

Primary Purpose and Description

The West Haven-Yale Multidimensional Pain Inventory (MPI) is an assessment that is divided into three parts with 13 empirically derived scales. Part I contains five scales designed to assess chronic pain patients. These are as follows: reports of pain severity (PS scale), perceptions of how pain interferes with their lives (I scale), appraisals of the amount of support received from significant others (S scale), perceived life control (LC scale), and affective distress (AD scale).

Part II of the MPI contains the frequency of a range of behavioral responses by significant others to their display of pain. This 14 question section can be broken into three smaller scales (6, Punishing Responses; 7, Solicitous Responses; and 8, Distracting Responses).

Part III is an activities checklist that contains 19 common activities that are used to form a General Activity scale (GA scale), which is also divided into five smaller scales (9, Household Chores; 10, Outdoor Work; 11, Activities Away From Home; 12, Social Activities; and 13, General Activity Level). The MPI was designed to establish profiles of pain groups using the classification system of dysfunctional, interpersonally distressed and adaptive coper.

Validation Methods and Samples

In 1988, Turk and Rudy[1] performed a study in which validation of the MPI was done through a one-way multivariate analysis of variance (MANOVA) computed with cluster scores as the independent variable. Patients' scores on the Pain Rating Index from the McGill, as well as a mean score from two week self-monitoring, were used as a dependent variables. This analysis indicated significant differences on the included external measures of pain severity ($F(4,204) = 8.10$, $P < 0.001$).

In a second analysis by Turk and Rudy, the results were compared with the results of the first study. A one-way MANOVA tested whether the posterior classifications, or which cluster patients were assigned to, were different from patient sample one and two. This proved to be nonsignificant. A 2-way MANOVA tested whether scores resulting from classification procedure were similar to the MPI scores from sample one. This proved to be nonsignificant, as well as the MANOVAs for the MPI scales. This is an indication that the pain classification system employed in the MPI has good reliability and external validity.

In a Faucett and Levine study[2], a structured telephone interview was used incorporating the McGill Pain Questionnaire sensory and affective subscales to measure pain, with the MPI, as well as the Family Environment Scale (FES) and Interpersonal Relationship Inventory (IPRI). The latter scales helped to measure social support and conflict. Personality and depression were assessed as well. It was found that the "contributions of social relationships to pain intensity depend on the nature of the chronic disorder and the type, or level, of the interpersonal relationship." This study helps to establish the face validity of the MPI.

Secondary Use

The MPI was designed to establish profiles of pain groups, and is used across disability groups. No secondary uses were found.

Measurement of Occupational Performance

Part III of the MPI is a direct measure of functional employment skills. This activities checklist contains 19 common activities that are used to form a General Activity scale (GA scale), which is also divided into five smaller scales (9, Household Chores; 10, Outdoor Work; 11, Activities Away From Home; 12, Social Activities; and 13, General Activity Level). Many of the activities are directly work related.

Additional Findings

The MPI is used quite extensively in pain research, primarily as a concurrent validity instrument. Computerized versions have also been developed.

References

1. Turk DC, Rudy TE. Toward an Empirically Derived Taxonomy of Chronic Pain Patients: Integration of Psychological Assessment Data. Journal of Consulting and Clinical Psychology 1988; 56(2): 233-238.
2. Faucett JA, and Levine JD. The Contributions of Interpersonal Conflict to Chronic Pain in the Presence or Absence of Organic Pathology. Pain 1991; 44: 35-43.

Instrument/method: Wisconsin Personality Disorders Inventory (WISPI)

Primary Purpose and Description

The Wisconsin Personality Disorders Inventory (WISPI) is a self-report questionnaire derived from an interpersonal theoretical perspective on the DSM-III-R personality disorders.[1] The test consists of 292 items that correspond to the 11 DSM-III-R personality disorder categories and the 10-item Marlowe-Crowne Scale for social desirability, for a total of 302 items. Each item is rated on a ten-point scale (1 = "never or not at all true of you" to 10 = "always or extremely true of you"). Respondents are told to rate "their usual selves in the past five years." The test is self-administered and takes about an hour to complete. Efforts are currently underway to validate a shortened version of the WISPI (224 items).

Validation Methods and Sample

The WISPI was originally validated with patients receiving mental health services and participants from the general public. Content validity of items was established by postdoctoral clinicians using sorting procedures. Test-retest reliability coefficients over two weeks were high (subscale average = .88). Estimated internal consistency of all subscales were also high (average Alpha = .90). The WISPI was generally able to discriminate patients from nonpatients with the exception of the histrionic, narcissistic, and antisocial subscales.[1] Within patient samples, the WISPI has shown good concurrent validity with Personality Disorders Questionnaire and moderate concurrent validity with the Millon Clinical Multi-axial Inventory-I and ratings by clinicians. The WISPI also demonstrated good convergent and discriminant validity with 5 of the 11 subscales of both the Structured Clinical Interview for DSM-III-R Personality Disorders-II and the Personality Disorders Examination.[2]

Secondary Use

The WISPI has been used to predict eating disorder outcome with the Borderline scale demonstrating significance at 4- to 5-year follow-up.[3]

Measurement of Occupational Performance

Our review did not yield any research on occupational performance using the WISPI .

Additional Findings

The WISPI can be administered and scored by computer but cannot be interpreted by a computer. The WISPI is non-intrusive and widely available.

References

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Section 6: Summary of Findings

The screening and secondary reviews of functional assessment instruments have identified a number of instruments which would have utility for SSA's disability determination process. The instruments selected for secondary review encompass measures of ADL, global measures of health, physical capacity tests, mental health screening instruments, and specialized tools for the assessment of pain and trauma. They include both benchmark instruments against which subsequent instruments are compared for validity (i.e., Barthel Index, FIM) as well as more recently developed instruments.
It is hoped that this review will allow SSA to select instruments with confidence as it proceeds with the disability determination redesign process, and to be able to assess any potential SSI or SSDI claimant.

Finding #1: The search yielded a large number of instruments currently in use

The project uncovered and screened a very large number of functional assessment instruments and methods during its initial search; more were discovered during the secondary reviews as staff delved deeper and deeper into the research literature. It is possible other instruments exist which did not come up in the search because of unusual or unique keyword identifiers, and undoubtedly more instruments are currently in development or are being field-tested. The review of functional assessment instrument presented in this report can serve as the framework for examination of new instruments that might become part of SSA disability determination protocols.

Finding #2: The search yielded no truly global measure of function

No instruments or methods were found which would be valid indicators of disability for all populations currently served by SSA. While many of the functional assessment rating scales such as the FIM included a broad array of functional indicators, none could adequately assess function as it relates to all types of physical, cognitive, and psychiatric impairments.

Finding #3: Most functional assessments in use relied upon self-reported data

It is significant to note that the majority of functional assessment instruments found and those subjected to further review relied upon self-report of symptomology. Clinical research tends to show that self-report assessments of status frequently do not agree with more objective measures, such as patient observations or results of physical examinations.[1] Many individuals either under-report or exaggerate their symptoms for a number of reasons. For example, under-reporting may occur because patients believe they are actually "getting better" when they are simply accepting or adjusting to their new, diminished status. Or they may under-report symptoms in acquiescence to the examiner, as a defense mechanism, or simply because they have unrealistic

beliefs about their conditions. With regards to physical testing, injured workers may perform at less than their capacities out of fear of re-injuring themselves or expectations of pain. Exaggeration of symptoms may result from a desire to receive assistance or rehabilitative services that might otherwise be unavailable. Another motivation for exaggeration arises for SSA claimants in that individuals must perform poorly in order to receive benefits, and it is unlikely that anyone would apply for benefits unless he or she truly wanted and needed them.

Self-report instruments have a number of advantages, including economy of time and expense. These types of instruments are almost universally brief, Likert-scaled questionnaires which could be easily and quickly be instituted in the SSA disability determination process. Inter-rater reliability tends to be higher for self-reports than for observational type measures, which would mean more consistency in disability determination decisions. However, the potential for misrepresentation cannot be disregarded.

Finding #4: Self-report scales offer few mechanisms for validation of data

Of the self-report instruments selected for secondary review, few have methods for assessing the validity of self-report data and those that do tend to be simplistic. As examples:

- The Functional Assessment Inventory (FAI) requires a third-party respondent, such as spouse or parent, for a portion of the instrument for assessing comparability of self-report responses; and the Katz Adjustment Scales are designed for parallel form completion by relatives and patient self-report. However, for SSA's claimants, parents and spouses would have the same motives for exaggeration of symptoms as claimants.

- The Disability Rating Index (DRI) items are arranged in increasing order of physical demand which, according to the developers, allows the interviewer to assess consistency of responses. However, the DRI is brief enough (12 visual analogue scales) that a determined individual could probably misrepresent his or her symptoms consistently.

Finding #5: Automated functional capacity systems offer more mechanisms for validation of data, but require more time and equipment

Methods that rely upon physical measures, such as the ERGOS Work Simulator and ARCON work capacity evaluations, have the advantage of measurement of quantifiable data, such as lifting strength, grip strength, range of motion, and walking speed. But such assessments require the luxury of time and equipment that may not be readily available to SSA's disability claim managers.

One possible solution to this dilemma is the development of "second tier" assessment protocols to supplement self-report functional assessments, for cases in which the

extent of a claimant's impairment is questionable. Second tier assessments could include physical work capacity evaluations, complete mental health assessment, or one of a number of specialized tests of malingering, such as the M Test.[2]

Insofar as secondary assessments of individuals with physical impairments, such as orthopedic disabilities, back injuries, etc., the automated or computer-generated assessments have many advantages over traditional examinations. We included four automated systems in our review -- ARCON, AssessAbility, the ERGOS Work Simulator, and the Physical Work Performance Evaluation (PWPE). For each of these systems, data from testing can be compared to industrial standards for specific jobs, thus linking functional capacities to occupational expectations. A distinct benefit of these systems is the ability of the examiner to use quantifiable data to assess maximum effort on the part of the evaulee. Most notably, the AssessAbility protocol allows the examiner to discretely meaure and record naturalistic movements on the part of the evaluee for comparison with test-related movements. This is the most sophisticated method of assessing maximum effort that was uncovered during the review. All of the four automated systems can be tailored to individuals or occupations and require approximately the same amount of time to administer (varying from approximaely 30 minutes to four hours); the AssessAbility and PWPE offer the advantage of not requiring expensive equipment, using instead common objects (boxes, shelving, etc.) and familiar and well-defined physical tasks.

Finding #6: Self-report questionnaires can be modified to offset potential exxageration of symptoms

Another possible tactic by SSA for increasing the validity of self-report questionnaires would be to modify scoring systems. Most of the self-report scales used a small number of Likert-scale options (five or fewer), with levels of impairment typically in ascending scale. Cut-off scores determine the degree of disability. The General Health Questionnaire (GHQ) utilizes a scoring system that has been copied by many subsequent assessments. While using a four-point Likert-scale for patient responses, the test can also be scored on a dichotomous system: either presence or absence of disability for each item. This technique negates the potential of individuals to, consciously or not, consistently rank all items at the extremes or in the middle ranges of scores. By modifying test scoring procedures for specific instruments, SSA can neutralize some degree of symptom exaggeration.

Finding #7: Predictive and concurrent validity of clinical instruments may not generalize to SSA claimant populations

We would also like to reiterate some points from the Preliminary Summary Report and subsequent meetings with the SSA Redesign Team. While a number of the instruments reviewed effectively correlate clinical measures with an individual's ability to perform various activities and tasks, current efforts to assess functional capacity are hampered by various methodological shortcomings. For example, validation strategies have relied extensively on concurrent validity approaches,

correlating the outcomes of a particular measure with those of related measures. Those instruments which have undergone extensive examinations of their content or predictive validity have generally correlated clinical measures with "rehabilitation outcomes," typically improved ADLs or improvement in the individual's health status at discharge. The relationship of these criterion variables to the process of determining whether an individual can engage in substantial gainful activity has not been sufficiently documented across the spectrum of functional assessment instruments, and should be a focus of further research by SSA.

In selecting instruments for secondary review, one criterion variable was the generalizability of an instrument to SSA claimant populations. Most often, this came down to a consideration of age. Thus, some ADL assessments which were initially validated with geriatric populations were included if the research base also showed validity with younger disabled persons. However, we must also note that other characteristics of the instruments may limit use with SSA claimant pools in unforeseeable ways. Only field-testing of the recommended assessments with SSA claimants can adequately determine which work best.

Finding #8: Specialized training for administering instruments needs to be a consideration in selection

The amount of training that disability claim managers will require to complete specific assessments must be considered. All of the instruments selected for further review had high inter-rater reliability. Yet in many cases, the instruments were designed to be administered following specialized training. The physical capacity tests, such as the PWPE, could even aggravate existing injuries if administered by an untrained examiner who pushes the evaluee beyond his or her physical limits. For these types of assessments, making the disability determination process consistent nationwide would require a substantial investment in training materials and/or expertise.

Finding #9: Functional assessments often include performance of social roles and expectations, not just symptoms

Finally, much discussion between the project and SSA focused on separation of disability determination from assessing employability. From our review, it appears that the direction of functional assessment instrument development is to incorporate not just somatic complaints and symptoms, but the impact of symptoms on the fulfillment of social roles and expectations -- home management, self-care, engagement in social and leisure activities, financial self-support and well-being, and employment. Many of the instruments reviewed defined disability as either partially or totally related to the ability to engage in these types of activities.

References

1. Bech P. Rating scales for psychopathology, health status and quality of life: a compendium of documentation in accordance with the DSM-III-R and WHO systems. Berlin: Springer-Verlag, 1993.
2. Beaber J, Marston A, Michelli J, Mills M. A brief test for measuring malingering. Am J Psych 1985; 142:1478-1481.

Functional Assessment Instruments and Methods

ot Selected for Further Review by Unit of Analysis

Instrument Category / Instrument Name	Instrument Purpose	Information Source	Reliability	Validity	Feasibility Availability
I. Physical or Mobility Impairment					
A. Global Measures of Physical Functioning and Mobility					
ARCON	general	direct meas	found	found	high
AssessAbility	general	direct meas	found	found	high
Brief Disability Questionnaire	general	self-report	found	found	high
Craig Handicap Assessment and Reporting Technique (CHART)	general	self-report	found	found	high
Disability Rating Index (DRI)	specific	self-report	found	found	high
ERGOS Work Simulator	general	direct meas	found	found	high
Physical Work Performance Evaluation (PWPE)	general	direct meas	found	found	high
PULSES Profile	general	other	found	found	high
Rapid Disability Rating Scale-2(RDRS-2)	general	other	found	found	high
B. Specific Measures of Physical Functioning and Mobility					
Disability Rating Scale (DRS)	specific	other	found	found	high
Multiperspective Multidimensional Pain Assessment Protocol (MMPAP)	specific	self-report/p	found	found	high
Pain Disability Index (PDI)	specific	self-report	found	found	high
UAB Pain Behavior Scale	specific	self-report/ot	found	found	high
West Haven-Yale Multiaxial Pain Inventory (MPI)	specific	self-report/ot	found	found	high
II. Cognitive Impairment					
A. Global Measures of Intelligence and Cognitive Functioning					
Ball Neuropsychological Screening Measure (BNSM)	general	other	found	found	high
Cognitive Capacity Screening Examination (CCSE)	specific	self-report	found	found	high
Global Assessment of Functioning (GAF)	specific	other	found	found	high
Mini-Mental State (MMS)	general	self-report	found	found	high
Shipley Institute Of Living Scale	general	self-report	found	found	high
Short Portable Mental Status Questionnaire (SPMSQ)	general	self-report	found	found	high
B. Specific Measures of Intelligence and Cognitive Functioning					
Category Test (HCT)	general	self-report	found	found	high

Functional Assessment Instruments and Methods

ot Selected for Further Review by Unit of Analysis

Neurobehavioral Rating Scale (NBRS)	specific	other	found	found	med
Neuropsychological Impairment Scales (NIS) Revised	general	self-report	found	found	high
III. Non-Cognitive Mental Impairment					
A. Global Measures of Non-Cognitive Mental Functioning					
Brief Psychiatric Rating Scale (BPRS)	general	other	found	found	high
Brief Symptoms Inventory (BSI)	general	self-report	found	found	high
General Health Questionnaire (GHQ)	general	self-report	found	found	high
Disability Rating Form	general	other	found	found	high
Framingham Functional Assessment Scale	general	other	found	found	med
Functional Assessment Inventory (FAI)	general	self-report	found	found	high
Katz Adjustment Scale (KAS-R)	general	self-report/ot	found	found	high
B. Specific Measures of Non-Cognitive Mental Functioning					
Back Depression Inventory (BDI)	specific	self-report	found	found	high
Brain Injury Rehabilitation Scale (BIRS)	specific	self-report	found	found	high
Wisconsin Personality Disorders Inventory (WISPI)	specific	self-report	found	found	high
IV. Health Status					
A. Global Measures of Health Status					
Duke Health Profile (DUKE)	general	self-report	found	found	high
Edinburgh Rehab Status Scale (ERSS)	general	other	found	found	med
Nottingham Health Profile (NHP)	general	self-report	found	found	med
Sickness Impact Profile (SIP)	general	self-report	found	found	high
B. Specific Measures of Health Status					
IWBI Index of Well Being	general	self-report	found	found	med
V. Measures of Self-Care, Activities of Daily Living (ADLs)					
Barthel Index - Modified (MBI)	general	self-report/ot	found	found	high

Functional Autonomy Measurement System	general	other	found	found	med
Functional Independence Measure (FIM)	general	other	found	found	high
Index of Independence in Activities of Daily Living	general	other	found	found	high
Patient Evaluation Conference System (PECS)	general	physician/ot	found	found	high
Functional Status Questionnaire (FSQ)	general	self-report	found	found	high

VI. Other

Preliminary Diagnostic Questionnaire (PDQ)	general	other	found	found	high
Rehabilitation Activities Profile (RAP)	general	physician/ot	found	found	high

Functional Assessment Instruments and Methods

ot Selected for Further Review by Unit of Analysis

Safety	Invasiveness	Ease of administration	Cost	Time Requirements	Generalizability Language	Disability	Computer
med	med	med	high	varies	undetermined	low	yes
med	med	med	low	varies	undetermined	low	yes
high	low	high	low	low	high	high	not found
high	low	high	low	low	high	high	not found
high	low	high	low	low	high	high	not found
med	med	med	high	varies	undetermined	low	yes
med	med	med	med	varies	high	low	yes
high	low	high	low	low	undetermined	low	not found
high	low	high	low	low	undetermined	high	not found
high	low	high	low	low	undetermined	med	not found
high	low	med	med	med	high	low	yes
high	low	high	low	low	undetermined	low	not found
high	low	high	low	low	undetermined	low	not found
high	low	high	low	low	high	low	yes
high	low	high	low	low	undetermined	med	not found
high	low	high	low	low	undetermined	high	not found
high	low	high	low	low	med	med	not found
high	low	high	low	low	high	med	not found
high	low	med	low	low	undetermined	med	not found
high	low	high	low	low	undetermined	med	not found
high	med	med	low	med	undetermined	med	yes

Functional Assessment Instruments and Methods

ot Selected for Further Review by Unit of Analysis

high	low	high	low	low	med	med	not found
high	low	high	low	low	undetermined	med	not found
high	low	high	low	low	high	high	not found
high	low	high	low	low	med	med	not found
high	low	high	low	low	high	high	not found
high	low	high	low	low	undetermined	med	not found
high	low	high	low	low	undetermined	ındetermine	not found
high	low	high	low	med	undetermined	med	not found
high	low	high	low	med	high	high	not found
high	low	high	low	low	high	low	yes
high	low	high	low	low	undetermined	med	not found
high	low	med	low	med	undetermined	low	yes
high	low	high	low	low	undetermined	high	not found
high	low	high	low	low	undetermined	high	not found
high	low	high	determin	low	undetermined	high	not found
high	low	med	low	med	med	high	not found
high	low	high	low	low	undetermined	high	not found
high	low	high	low	low	Page 15	high	not found

high	low	high	low	low	high	high	not found
high	low	high	low	low	high	high	yes
high	low	high	low	low	low	high	not found
high	low	high	low	low	undetermined	high	not found
high	low	high	low	low	undetermined	high	yes
high	low	high	low	med	low	high	yes
high	low	high	low	low	undetermined	high	not found

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Instrument Purpose	Information Source	Primary Reason not Selected
I. Physical or Mobility Impairment			
A. Global Measures of Physical Functioning and Mobility			
Acute Care Index of Function (ACIF)	unknown	undetermined	Absence of Reliability / Validity
Available Motions Inventory	unknown	undetermined	Absence of Reliability / Validity
Berg Balance Scale	general	undetermined	Not generalizable to SSA programs
California Functional Capacity Protocol	unknown	undetermined	Absence of Reliability / Validity
Community Disability Scale	unknown	undetermined	Absence of Reliability / Validity
Disability and Impairment Interview Schedule	general	other	Limited availability
Disability Diagnostic Scale	unknown	undetermined	Absence of Reliability / Validity
Evaluation System for Outpatient Rehabilitation Programs (RESTORE)	unknown	undetermined	Absence of Reliability / Validity
Fugl-Meyer	general	individual	Not generalizable to SSA programs
Functional Activities Questionnaire (FAQ)	specific	patient	Specificity of functions
Functional Autonomy Measurement System	general	other	Absence of Reliability / Validity
Functional Status Review	unknown	undetermined	Absence of Reliability / Validity
Glascow Assessment Schedule (GAS)	specific	patient/doctor	Specificity of functions
Hospital Utilization Project (HUP)	general	interview(other)	Not generalizable to SSA programs
Keitel Functional Index	specific	observer	Specificity of functions
Kenny Self-Care Evaluation	general	observer	Not generalizable to SSA programs
Lambeth Disability Screening Questionnaire	general	self-report	Other
Level of Rehabilitation (LORS II)	unknown	undetermined	Absence of Reliability / Validity
London Handicap Scale	specific	self-report	Specificity of functions
Long Range Evaluation system (LRES)	unknown	undetermined	Absence of Reliability / Validity
Longitudinal Functional Assessment System	unknown	undetermined	Absence of Reliability / Validity
Motor Assessment Scale	general	undetermined	Invasive
Multifunction Needs Assessment	unknown	undetermined	Absence of Reliability / Validity
New Medico Comprehensive Assessment Inventory for Rehabilitation (N	unknown	undetermined	Absence of Reliability / Validity
Nottingham Health Profile	general	self-adm	Limited availability
OECD Long-Term disability questionnaire	unknown	undetermined	Absence of Reliability / Validity
Physical and Mental Impairment-of-Function Evaluation	unknown	undetermined	Absence of Reliability / Validity
Physical Self-Maintenance Scale	general	other	Other
Rankin Scale	general	undetermined	Not generalizable to SSA programs
Rivermead Mobility Index	general	undetermined	Limited availability
Rosow-Breslau Functional Health Index	unknown	undetermined	Absence of Reliability / Validity
WHO Disablement Rating Scale	unknown	undetermined	Absence of Reliability / Validity

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Reliability	Validity	Feasibility	Safety	Invasiveness
I. Physical or Mobility Impairment					
A. Global Measures of Physical Functioning and Mobility					
Acute Care Index of Function (ACIF)	not found	not found	undetermine	ndetermin	undetermined
Available Motions Inventory	not found	not found	undetermine	ndetermin	undetermined
Berg Balance Scale	X	X	*	*	*
California Functional Capacity Protocol	not found	not found	undetermine	ndetermin	undetermined
Community Disability Scale	not found	not found	undetermine	ndetermin	undetermined
Disability and Impairment Interview Schedule	X	X			
Disability Diagnostic Scale	not found	not found	undetermine	ndetermin	undetermined
Evaluation System for Outpatient Rehabilitation Programs (RESTORE)	not found	not found	undetermine	ndetermin	undetermined
Fugl-Meyer	X	X	-	+*	-
Functional Activities Questionnaire (FAQ)	X	X	+*	+*	-
Functional Autonomy Measurement System	not found	not found	*	*	*
Functional Status Review	not found	not found	undetermine	ndetermin	undetermined
Glascow Assessment Schedule (GAS)	X	X	+*	+*	-
Hospital Utilization Project (HUP)	X	X	-	+*	-
Keitel Functional Index	found	found	+*	ndetermin	undetermined
Kenny Self-Care Evaluation	X	X	undetermine	ndetermin	undetermined
Lambeth Disability Screening Questionnaire	X	X	undetermine	ndetermin	undetermined
Level of Rehabilitation (LORS II)	not found	not found	undetermine	ndetermin	undetermined
London Handicap Scale	found	found	undetermine	ndetermin	undetermined
Long Range Evaluation system (LRES)	not found	not found	undetermine	ndetermin	undetermined
Longitudinal Functional Assessment System	not found	not found	undetermine	ndetermin	undetermined
Motor Assessment Scale	X	X	*	*	-
Multifunction Needs Assessment	not found	not found	undetermine	ndetermin	undetermined
New Medico Comprehensive Assessment Inventory for Rehabilitation (N	not found	not found	undetermine	ndetermin	undetermined
Nottingham Health Profile	X	X	undetermine	ndetermin	undetermined
OECD Long-Term disability questionnaire	not found	not found	undetermine	ndetermin	undetermined
Physical and Mental Impairment-of-Function Evaluation	not found	not found	undetermine	ndetermin	undetermined
Physical Self-Maintenance Scale	found	found	+*	ndetermin	undetermined
Rankin Scale	X	X	*	*	*
Rivermead Mobility Index	X	X	*	*	*
Rosow-Breslau Functional Health Index	not found	not found	undetermine	ndetermin	undetermined
WHO Disablement Rating Scale	not found	not found	undetermine	ndetermin	undetermined

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Ease of administration	Cost	Time Requirements	Generalizability Language
I. Physical or Mobility Impairment				
A. Global Measures of Physical Functioning and Mobility				
Acute Care Index of Function (ACIF)	undetermined	ndetermin	undetermined	undetermined
Available Motions Inventory	undetermined	ndetermin	undetermined	undetermined
Berg Balance Scale	+*	-		-
California Functional Capacity Protocol	undetermined	ndetermin	undetermined	undetermined
Community Disability Scale	undetermined	ndetermin	undetermined	undetermined
Disability and Impairment Interview Schedule				
Disability Diagnostic Scale	undetermined	ndetermin	undetermined	undetermined
Evaluation System for Outpatient Rehabilitation Programs (RESTORE)	undetermined	ndetermin	undetermined	undetermined
Fugl-Meyer		-		+*
Functional Activities Questionnaire (FAQ)	+*	-		+*
Functional Autonomy Measurement System	*	ndetermin	*	undetermined
Functional Status Review	undetermined	ndetermin	undetermined	undetermined
Glascow Assessment Schedule (GAS)	+*	+		+*
Hospital Utilization Project (HUP)	+*	-		-
Keitel Functional Index	+*	ndetermin	-*	German
Kenny Self-Care Evaluation	undetermined	ndetermin	undetermined	undetermined
Lambeth Disability Screening Questionnaire	undetermined	ndetermin	undetermined	undetermined
Level of Rehabilitation (LORS II)	undetermined	ndetermin	undetermined	undetermined
London Handicap Scale	undetermined	ndetermin	undetermined	undetermined
Long Range Evaluation system (LRES)	undetermined	ndetermin	undetermined	undetermined
Longitudinal Functional Assessment System	undetermined	ndetermin	undetermined	undetermined
Motor Assessment Scale	*	-	undetermined	-
Multifunction Needs Assessment	undetermined	ndetermin	undetermined	undetermined
New Medico Comprehensive Assessment Inventory for Rehabilitation (N	undetermined	ndetermin	undetermined	undetermined
Nottingham Health Profile	undetermined	ndetermin	undetermined	undetermined
OECD Long-Term disability questionnaire	undetermined	ndetermin	undetermined	undetermined
Physical and Mental Impairment-of-Function Evaluation	undetermined	ndetermin	undetermined	undetermined
Physical Self-Maintenance Scale	undetermined	ndetermin	undetermined	undetermined
Rankin Scale	+*	-	undetermined	-
Rivermead Mobility Index	+*	-	undetermined	-
Rosow-Breslau Functional Health Index	undetermined	ndetermin	undetermined	undetermined
WHO Disablement Rating Scale	undetermined	ndetermin	undetermined	undetermined

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Disability	Computer	Verification of Effort
I. Physical or Mobility Impairment			
A. Global Measures of Physical Functioning and Mobility			
Acute Care Index of Function (ACIF)	indetermine	indetermine	undetermined
Available Motions Inventory	indetermine	indetermine	undetermined
Berg Balance Scale	-	-	
California Functional Capacity Protocol	indetermine	indetermine	undetermined
Community Disability Scale	indetermine	indetermine	undetermined
Disability and Impairment Interview Schedule			
Disability Diagnostic Scale	indetermine	indetermine	undetermined
Evaluation System for Outpatient Rehabilitation Programs (RESTORE)	indetermine	indetermine	undetermined
Fugl-Meyer	-	-	
Functional Activities Questionnaire (FAQ)	*	-	
Functional Autonomy Measurement System	indetermine	indetermine	undetermined
Functional Status Review	indetermine	indetermine	undetermined
Glascow Assessment Schedule (GAS)	-	-	
Hospital Utilization Project (HUP)	+*	-	
Keitel Functional Index	indetermine	indetermine	undetermined
Kenny Self-Care Evaluation	indetermine	indetermine	undetermined
Lambeth Disability Screening Questionnaire	indetermine	indetermine	undetermined
Level of Rehabilitation (LORS II)	indetermine	indetermine	undetermined
London Handicap Scale	indetermine	indetermine	undetermined
Long Range Evaluation system (LRES)	indetermine	indetermine	undetermined
Longitudinal Functional Assessment System	indetermine	indetermine	undetermined
Motor Assessment Scale	-	-	undetermined
Multifunction Needs Assessment	indetermine	indetermine	undetermined
New Medico Comprehensive Assessment Inventory for Rehabilitation (N	indetermine	indetermine	undetermined
Nottingham Health Profile	indetermine	indetermine	undetermined
OECD Long-Term disability questionnaire	indetermine	indetermine	undetermined
Physical and Mental Impairment-of-Function Evaluation	indetermine	indetermine	undetermined
Physical Self-Maintenance Scale	indetermine	indetermine	undetermined
Rankin Scale	-	-	undetermined
Rivermead Mobility Index	-	-	undetermined
Rosow-Breslau Functional Health Index	indetermine	indetermine	undetermined
WHO Disablement Rating Scale	indetermine	indetermine	undetermined

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Instrument Purpose	Information Source	Primary Reason not Selected
B. Upper Extremity Movement/Fine Motor			
Available Motions Inventory	specific	individual	Intrusive
BTE Work Simulator	general	direct measure	Intrusive
Timed Manual Performance Test (Long & Short Version)	specific (senio	other	Intrusive
C. Lower Extremity Movement and Locomotion			
Accelerometer	general	direct measure	Absence of Reliability / Validity
Actometer	general	direct measure	Absence of Reliability / Validity
Hemiplegic Gait Analysis Form	specific	PTs-other	Specificity of functions
Medical Assessment for Incapacity Benefit	unknown	undetermined	Absence of Reliability / Validity
Motionlogger Actigraph	unknown	undetermined	Absence of Reliability / Validity
Pedometer	general	direct measure	Absence of Reliability / Validity
Stabilimeters	unknown	undetermined	Absence of Reliability / Validity
Step Counter	unknown	undetermined	Absence of Reliability / Validity
D. Pain			
Back Pain Classification Scale (BPCS)	specific	self	Intrusive
Illness Behavior Questionnaire (IBQ)	general	self	Not generalizable to SSA programs
Index for Clinical Assessment of Pain	unknown	undetermined	Absence of Reliability / Validity
Low Back Pain Rating Scale	specific	self	Specificity of functions
McGill Pain Questionnaire (MPQ)	general	administrator	Not generalizable to SSA programs
Northwick Park Neck Pain Questionnaire	specific	self	Specificity of functions
Oswestry Low Back Pain Disability Questionnaire	specific	self	Intrusive
Pain and Distress Scale (PAD)	general	self	Intrusive
Pain Perception Profile	unknown	undetermined	Absence of Reliability / Validity
Pressure Algometer	general	physician	Intrusive
Progressive Isoinertial Lifting Evaluation	specific	direct measure	Specificity of functions
Quebec Back Pain Disability Scale	specific	self	Specificity of functions
SAD Index for Clinical Assessment of Pain	general		Intrusive
Self-Rating Pain and Distress Scale	unknown	undetermined	Absence of Reliability / Validity
Shoulder Pain and Disability Index	specific	other	Specificity of functions

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Reliability	Validity	Feasibility	Safety	Invasiveness
B. Upper Extremity Movement/Fine Motor					
Available Motions Inventory	X	X	-	+*	+*
BTE Work Simulator	found	found	+*	*	undetermined
Timed Manual Performance Test (Long & Short Version)	X	X	-	+*	+*
C. Lower Extremity Movement and Locomotion					
Accelerometer	not found	not found	+*	ndetermin	undetermined
Actometer	not found	not found	undetermine	ndetermin	undetermined
Hemiplegic Gait Analysis Form	X	X	-*	+*	-*
Medical Assessment for Incapacity Benefit	not found	not found	undetermine	ndetermin	undetermined
Motionlogger Actigraph	not found	not found	undetermine	ndetermin	undetermined
Pedometer	not found	not found	+*	+*	-*
Stabilimeters	not found	not found	undetermine	ndetermin	undetermined
Step Counter	not found	not found	undetermine	ndetermin	undetermined
D. Pain					
Back Pain Classification Scale (BPCS)	X	X	-	+*	+*
Illness Behavior Questionnaire (IBQ)	X	X	-	+*	-*
Index for Clinical Assessment of Pain	not found	not found	undetermine	ndetermin	undetermined
Low Back Pain Rating Scale	found	found	+*	ndetermin	undetermined
McGill Pain Questionnaire (MPQ)	X	X	+*	+*	+*
Northwick Park Neck Pain Questionnaire	found	not found	undetermine	ndetermin	-*
Oswestry Low Back Pain Disability Questionnaire	X	X	+*	+*	+*
Pain and Distress Scale (PAD)	X	X	+*	+*	+*
Pain Perception Profile	not found	not found	undetermine	ndetermin	undetermined
Pressure Algometer	X	X	-	-	-*
Progressive Isoinertial Lifting Evaluation	found	found	undetermine	ndetermin	-*
Quebec Back Pain Disability Scale	found	found	+*	ndetermin	-*
SAD Index for Clinical Assessment of Pain	X	X	-	+*	+*
Self-Rating Pain and Distress Scale	not found	not found	undetermine	ndetermin	undetermined
Shoulder Pain and Disability Index	found	found	+*	ndetermin	-*

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Ease of administration	Cost	Time Requirements	Generalizability Language
B. Upper Extremity Movement/Fine Motor				
Available Motions Inventory	-*	-	undetermined	-
BTE Work Simulator	*	ndetermin	undetermined	undetermined
Timed Manual Performance Test (Long & Short Version)	-*	-	undetermined	-
C. Lower Extremity Movement and Locomotion				
Accelerometer	undetermined	ndetermin	undetermined	undetermined
Actometer	undetermined	ndetermin	undetermined	undetermined
Hemiplegic Gait Analysis Form	-*	-	undetermined	-
Medical Assessment for Incapacity Benefit	undetermined	ndetermin	undetermined	undetermined
Motionlogger Actigraph	undetermined	ndetermin	undetermined	undetermined
Pedometer	+*	ndetermin	undetermined	undetermined
Stabilimeters	undetermined	ndetermin	undetermined	undetermined
Step Counter	undetermined	ndetermin	undetermined	undetermined
D. Pain				
Back Pain Classification Scale (BPCS)	+*	+*	undetermined	-
Illness Behavior Questionnaire (IBQ)	+*	-		-
Index for Clinical Assessment of Pain	undetermined	ndetermin	undetermined	undetermined
Low Back Pain Rating Scale	+*	ndetermin	-*	Danish
McGill Pain Questionnaire (MPQ)	+*	+*	undetermined	-
Northwick Park Neck Pain Questionnaire	+*	ndetermin	-*	undetermined
Oswestry Low Back Pain Disability Questionnaire	+*	ndetermin	undetermined	+*
Pain and Distress Scale (PAD)	+*	+*	undetermined	+*
Pain Perception Profile	undetermined	ndetermin	undetermined	undetermined
Pressure Algometer	-	-*	undetermined	-
Progressive Isoinertial Lifting Evaluation	undetermined	ndetermin	undetermined	undetermined
Quebec Back Pain Disability Scale	+*	ndetermin	undetermined	undetermined
SAD Index for Clinical Assessment of Pain	+*	-	undetermined	-
Self-Rating Pain and Distress Scale	undetermined	ndetermin	undetermined	undetermined
Shoulder Pain and Disability Index	+*	ndetermin	-*	undetermined

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Disability	Computer	Verification of Effort
B. Upper Extremity Movement/Fine Motor			
Available Motions Inventory	-	-	undetermined
BTE Work Simulator	undetermine	+*	undetermined
Timed Manual Performance Test (Long & Short Version)	-*	-	undetermined
C. Lower Extremity Movement and Locomotion			
Accelerometer	undetermine	undetermine	undetermined
Actometer	undetermine	undetermine	undetermined
Hemiplegic Gait Analysis Form	-	-	undetermined
Medical Assessment for Incapacity Benefit	undetermine	undetermine	undetermined
Motionlogger Actigraph	undetermine	undetermine	undetermined
Pedometer	undetermine	undetermine	undetermined
Stabilimeters	undetermine	undetermine	undetermined
Step Counter	undetermine	undetermine	undetermined
D. Pain			
Back Pain Classification Scale (BPCS)	-	-	undetermined
Illness Behavior Questionnaire (IBQ)	-	-	undetermined
Index for Clinical Assessment of Pain	undetermine	undetermine	undetermined
Low Back Pain Rating Scale	undetermine	undetermine	undetermined
McGill Pain Questionnaire (MPQ)	-	-	undetermined
Northwick Park Neck Pain Questionnaire	undetermine	undetermine	undetermined
Oswestry Low Back Pain Disability Questionnaire	-	+*	undetermined
Pain and Distress Scale (PAD)	*	+*	undetermined
Pain Perception Profile	undetermine	undetermine	undetermined
Pressure Algometer	-	-	undetermined
Progressive Isoinertial Lifting Evaluation	undetermine	undetermine	undetermined
Quebec Back Pain Disability Scale	undetermine	undetermine	undetermined
SAD Index for Clinical Assessment of Pain	-	-	undetermined
Self-Rating Pain and Distress Scale	undetermine	undetermine	undetermined
Shoulder Pain and Disability Index	undetermine	undetermine	undetermined

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Instrument Purpose	Information Source	Primary Reason not Selected
Summary of Nonorganic Signs (Waddell)	specific	physician	Specificity of functions
Visual Analogue Pain Rating Scale	general	self	Not generalizable to SSA programs
E. Strength and Endurance			
Functional Capacity Evaluation	general	other	Absence of Reliability / Validity
Hand Dynamometer or Grip Strength Test	unknown	undetermined	Specificity of function
Heart Rate	unknown	undetermined	Absence of Reliability / Validity
Isometric Strength Testing Unit	general	direct	Not generalizable to SSA programs
Motricity Index	general	undetermined	Other
Oxygen Consumption	unknown	undetermined	Not generalizable to SSA programs
II. Cognitive Impairment			
A. Global Measures of Intelligence and Cognitive Functioning			
Agency for Toxic Substances and Disease Registry (ATSDR) Battery	specific	other/direct	Specificity of functions
Bay Area Functional Performance Evaluation (BAFPE)	general	other	Limited availability
Bear-Fedio Inventories	general	patient	Absence of Reliability / Validity
Career Ability Placement Survey (CAPS)	general	patient	Not generalizable to SSA programs
Cognitive Behavior Rating Scales (Research Edition)	general	patient/other	Absence of Reliability / Validity
Cognitive Competency Test	specific	other	Intrusive
Geriatric Rating Scale (GRS)	specific	patient	Specificity of functions
Halstead Russell Neuropsychological Evaluation System (HRNES)	general	other/pt	Absence of Reliability / Validity
Halstead-Reitan Battery (HRB)	general	other/pt	Not generalizable to SSA programs
Iowa Screening Battery for Mental Decline Manual	specific	other/pt	Specificity of functions
Ischemic Score/Revised Ischemic Score	specific	other/pt	Specificity of functions
MacQuarrie Test for Mechanical Ability	general	other/pt	Not generalizable to SSA programs
Mental Function Index (MFI)	specific	other/pt	Specificity of functions
Michigan Neuropsychological Test Battery	general	other/pt	Absence of Reliability / Validity
Multicenter AIDS Cohort Study Battery (MACS)	specific	other/pt	Specificity of functions
Neurobehavioral Cognitive Status Examination	general	undetermined	Not generalizable to SSA programs
Neurobehavioral Test Battery	specific	other/pt	Specificity of functions
Neuropsychological Screening Battery	specific	other/pt	Specificity of functions
Neuropsychological Test Battery	general	other/pt	Not generalizable to SSA programs

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Reliability	Validity	Feasibility: Availability	Safety	Invasiveness
Summary of Nonorganic Signs (Waddell)	not found	not found	undetermined	undetermin	undetermined
Visual Analogue Pain Rating Scale	not found	not found	+*	+*	+*
E. Strength and Endurance					
Functional Capacity Evaluation	not found	not found	+*	ndetermin	undetermined
Hand Dynamometer or Grip Strength Test	not found	not found	undetermined	undetermin	undetermined
Heart Rate	not found	not found	undetermined	undetermin	undetermined
Isometric Strength Testing Unit	found	found	undetermined	undetermin	undetermined
Motricity Index	X	X	*	*	*
Oxygen Consumption	not found	not found	undetermined	undetermin	undetermined
II. Cognitive Impairment					
A. Global Measures of Intelligence and Cognitive Functioning					
Agency for Toxic Substances and Disease Registry (ATSDR) Battery	not found	not found	undetermined	+*	-*
Bay Area Functional Performance Evaluation (BAFPE)	found	found	+	+*	-*
Bear-Fedio Inventories	not found	not found	+*	+*	undetermined
Career Ability Placement Survey (CAPS)	found	found	+*	+*	undetermined
Cognitive Behavior Rating Scales (Research Edition)	not found	not found	undetermined	+*	undetermined
Cognitive Competency Test	found	found	*	+*	+*
Geriatric Rating Scale (GRS)	X	X	+*	+*	*
Halstead Russell Neuropsychological Evaluation System (HRNES)	not found	not found	+*	+*	-*
Halstead-Reitan Battery (HRB)	found	found	+*	+*	-*
Iowa Screening Battery for Mental Decline Manual	not found	not found	+*	+*	-*
Ischemic Score/Revised Ischemic Score	found	found	+*	+*	-*
MacQuarrie Test for Mechanical Ability	found	found	+*	+*	-*
Mental Function Index (MFI)	found	not found	+*	+*	-*
Michigan Neuropsychological Test Battery	not found	found	+*	+*	-*
Multicenter AIDS Cohort Study Battery (MACS)	found	found	+*	+*	-*
Neurobehavioral Cognitive Status Examination	X	X	*	*	*
Neurobehavioral Test Battery	not found	found	undetermined	+*	-*
Neuropsychological Screening Battery	found	found	+*	+*	-*
Neuropsychological Test Battery	found	found	+*	+*	-*

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Ease of administration	Cost	Time Requirements	Generalizability Language
Summary of Nonorganic Signs (Waddell)	undetermined	ndetermin	undetermined	undetermined
Visual Analogue Pain Rating Scale	undetermined	ndetermin	undetermined	undetermined
E. Strength and Endurance				
Functional Capacity Evaluation	undetermined	ndetermin	undetermined	undetermined
Hand Dynamometer or Grip Strength Test	undetermined	ndetermin	undetermined	undetermined
Heart Rate	undetermined	ndetermin	undetermined	undetermined
Isometric Strength Testing Unit	undetermined	ndetermin	undetermined	undetermined
Motricity Index	+*	-	undetermined	-
Oxygen Consumption	undetermined	ndeterminr	undetermined	undetermined
II. Cognitive Impairment				
A. Global Measures of Intelligence and Cognitive Functioning				
Agency for Toxic Substances and Disease Registry (ATSDR) Battery	+*	ndetermin	undetermined	+*
Bay Area Functional Performance Evaluation (BAFPE)	+*	ndetermin	undetermined	+*
Bear-Fedio Inventories	+*	ndetermin	undetermined	+*
Career Ability Placement Survey (CAPS)	+*	ndetermin	-*	+*
Cognitive Behavior Rating Scales (Research Edition)	+*	ndetermin	undetermined	+*
Cognitive Competency Test	undetermined	*	undetermined	+*
Geriatric Rating Scale (GRS)	+*	-		-
Halstead Russell Neuropsychological Evaluation System (HRNES)	-*	ndetermin	+*	+*
Halstead-Reitan Battery (HRB)	-*	ndetermin	+*	+*
Iowa Screening Battery for Mental Decline Manual	+*	-*	-*	+*
Ischemic Score/Revised Ischemic Score	+*	-*	-*	+*
MacQuarrie Test for Mechanical Ability	+*	-*	-*	+*
Mental Function Index (MFI)	+*	-*	-*	+*
Michigan Neuropsychological Test Battery	*	*	+*	+*
Multicenter AIDS Cohort Study Battery (MACS)	+*	-*	*	+*
Neurobehavioral Cognitive Status Examination	+*	-		-
Neurobehavioral Test Battery	+*	ndetermin	*	+*
Neuropsychological Screening Battery	+*	ndetermin	*	+*
Neuropsychological Test Battery	+*	-*	*	+*

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Disability	Computer	Verification of Effort
Summary of Nonorganic Signs (Waddell)	Undetermine	Undetermine	Undetermined
Visual Analogue Pain Rating Scale	Undetermine	Undetermine	Undetermined
E. Strength and Endurance			
Functional Capacity Evaluation	Undetermine	Undetermine	Undetermined
Hand Dynamometer or Grip Strength Test	Undetermine	Undetermine	Undetermined
Heart Rate	Undetermine	Undetermine	Undetermined
Isometric Strength Testing Unit	Undetermine	Undetermine	Undetermined
Motricity Index	-	-	Undetermined
Oxygen Consumption	Undetermine	Undetermine	Undetermined
II. Cognitive Impairment			
A. Global Measures of Intelligence and Cognitive Functioning			
Agency for Toxic Substances and Disease Registry (ATSDR) Battery	+*	+*	
Bay Area Functional Performance Evaluation (BAFPE)	+*	Undetermined	
Bear-Fedio Inventories	+*	+*	
Career Ability Placement Survey (CAPS)	+*	+*	
Cognitive Behavior Rating Scales (Research Edition)	+*	+*	
Cognitive Competency Test	Undetermine	Undetermined	
Geriatric Rating Scale (GRS)	-	-	
Halstead Russell Neuropsychological Evaluation System (HRNES)	+*	Undetermined	
Halstead-Reitan Battery (HRB)	+*	Undetermined	
Iowa Screening Battery for Mental Decline Manual	+*	+*	
Ischemic Score/Revised Ischemic Score	+*	-*	
MacQuarrie Test for Mechanical Ability	+*	Undetermined	
Mental Function Index (MFI)	+*	Undetermined	
Michigan Neuropsychological Test Battery	+*	Undetermined	
Multicenter AIDS Cohort Study Battery (MACS)	+*	+*	
Neurobehavioral Cognitive Status Examination	-	-	
Neurobehavioral Test Battery	+*	Undetermined	
Neuropsychological Screening Battery	+*	Undetermined	
Neuropsychological Test Battery	+*	Undetermined	

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Instrument Purpose	Information Source	Primary Reason not Selected
NIMH Core Neuropsychological Battery			No research base
Peabody Individual Achievement Test (PIAT, PIAT-R)	specific (K-12	patient	Specificity of functions
Pittsburgh Occupation Exposures Test (POET)	general	other/pt	Absence of Reliability / Validity
Primary Mental Abilities (PMA)	general	other/pt	Not generalizable to SSA programs
Rancho Los Amigos Scale: Levels of Cognitive Functioning	specific	other	Specificity of functions
S.O.N.R. 5 1/2-17	specific (5 1/2-	patient	Specificity of functions
Slosson Intelligence Test	general	other/pt	Not generalizable to SSA programs
Stanford-Binet Intelligence Scale	general	other/pt	Not generalizable to SSA programs
Wechsler Adult Intelligence Scales (WAIS, WAIS-R)	general	patient\doctor	Not generalizable to SSA programs
Woodcock-Johnson Psycho-Educational Battery-Revised (WJ-R)	general	patient/other	Not generalizable to SSA programs
B. Memory			
Auditory-Verbal Learning Test (AVLT)	general	patient	Not generalizable to SSA programs
Autobiographical Memory Interview (AMI)	specific	patient	Specificity of functions
Babcock Story Recall Test	general	pt/other	Not generalizable to SSA programs
Biber Figure Learning Test (BFLT)	general	pt/other	Not generalizable to SSA programs
California Discourse Memory Test (CDMT)	general	pt/other	Not generalizable to SSA programs
California Verbal Learning Test (CVLT), Adult Version	general	patient	Not generalizable to SSA programs
Complex Figure Test: Recall Administration (CFT-I, CFT-D)	general	patient/doctor	Specificity of functions
Continuous Visual Memory Test (CVMT)	general	pt/other	Not generalizable to SSA programs
Denman Neuropsychology Memory Scale	general	pt/other	Not generalizable to SSA programs
Expanded Paired Associate Test (EPAT)	general	pt/other	Not generalizable to SSA programs
Form Sequence Learning (FSL)	general	pt/other	Absence of Reliability / Validity
Hebb's Recurring Digits	general	pt/other	Not generalizable to SSA programs
Hopkins Verbal Learning Test	general	pt/other	Not generalizable to SSA programs
Inventory of Memory Experiences (IME)	general	pt/other	Absence of Reliability / Validity
Learning and Memory Battery (LAMB)	general	pt/other	Not generalizable to SSA programs
Memory Assessment Clinics Self-Rating Scale (MAC-S)	general	pt	Not generalizable to SSA programs
Memory Assessment Scales (MAS)	general	patient	Not generalizable to SSA programs
Memory for Designs Test (MFD)	general	pt/other	Absence of Reliability / Validity
Memory Functioning Questionnaire	general	patient	Not generalizable to SSA programs
Non-Language Paired Associate Learning Test	general	pt/other	Absence of Reliability / Validity
Recognition Memory Test (RMT)	general	pt/other	Not generalizable to SSA programs
Rey Auditory Verbal Learning	general	pt/other	Not generalizable to SSA programs

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Reliability	Validity	Feasibility		
			Availability	Safety	Invasiveness
NIMH Core Neuropsychological Battery					
Peabody Individual Achievement Test (PIAT, PIAT-R)	X	X	+*	+*	-*
Pittsburgh Occupation Exposures Test (POET)	not found	not found	+*	+*	-*
Primary Mental Abilities (PMA)	found	found	+*	+*	-*
Rancho Los Amigos Scale: Levels of Cognitive Functioning	found	found	+*	+*	-*
S.O.N.R. 5 1/2-17	X	X	+*	+*	-*
Slosson Intelligence Test	found	found	+*	+*	-*
Stanford-Binet Intelligence Scale	found	found	+*	+*	-*
Wechsler Adult Intelligence Scales (WAIS, WAIS-R)	X	X	+*	+*	-
Woodcock-Johnson Psycho-Educational Battery-Revised (WJ-R)	found	found	+*	+*	-*
B. Memory					
Auditory-Verbal Learning Test (AVLT)	X	X	+*	+*	-*
Autobiographical Memory Interview (AMI)	X	X	+*	+*	-
Babcock Story Recall Test	found	not found	+*	+*	-*
Biber Figure Learning Test (BFLT)	found	found	+*	+*	-*
California Discourse Memory Test (CDMT)	found	found	+*	+*	-*
California Verbal Learning Test (CVLT), Adult Version	X	X	+*	+*	-*
Complex Figure Test: Recall Administration (CFT-I, CFT-D)	X	X	*	+*	+*
Continuous Visual Memory Test (CVMT)	found	found	+*	+*	-*
Denman Neuropsychology Memory Scale	found	found	*	+*	-*
Expanded Paired Associate Test (EPAT)	found	found	+*	+*	-*
Form Sequence Learning (FSL)	not found	not found	+*	+*	-*
Hebb's Recurring Digits	found	not found	+*	+*	-*
Hopkins Verbal Learning Test	found	found	+*	+*	-*
Inventory of Memory Experiences (IME)	not found	not found	+*	+*	*,-*
Learning and Memory Battery (LAMB)	found	found	+*	+*	-*
Memory Assessment Clinics Self-Rating Scale (MAC-S)	found	found	+*	+*	-*,*
Memory Assessment Scales (MAS)	X	X	+*	+*	-*
Memory for Designs Test (MFD)	not found	not found	+*	+*	-*
Memory Functioning Questionnaire	found	found	+*	+*	-*,*
Non-Language Paired Associate Learning Test	not found	not found	+*	+*	-*
Recognition Memory Test (RMT)	found	found	+*	+*	-*
Rey Auditory Verbal Learning	found	found	+*	+*	-*

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Ease of administration	Cost	Time Requirements	Generalizability Language
NIMH Core Neuropsychological Battery				
Peabody Individual Achievement Test (PIAT, PIAT-R)	+*	-		+*
Pittsburgh Occupation Exposures Test (POET)	*	*	+*	+*
Primary Mental Abilities (PMA)	+*	-*	-*	+*
Rancho Los Amigos Scale: Levels of Cognitive Functioning	+*	-*	-*	+*
S.O.N.R. 5 1/2-17	+*	-		+*
Slosson Intelligence Test	+*	ndetermin	*	+*
Stanford-Binet Intelligence Scale	-*	*	+*	+*
Wechsler Adult Intelligence Scales (WAIS, WAIS-R)	+*	*		-
Woodcock-Johnson Psycho-Educational Battery-Revised (WJ-R)	-*	*	+*	+*
B. Memory				
Auditory-Verbal Learning Test (AVLT)	+*	-		*
Autobiographical Memory Interview (AMI)	+*	*		+*
Babcock Story Recall Test	+*	-*	-*	+*
Biber Figure Learning Test (BFLT)	+*	-*	*	+*
California Discourse Memory Test (CDMT)	+*	ndetermin	*	+*
California Verbal Learning Test (CVLT), Adult Version	+*	-		-
Complex Figure Test: Recall Administration (CFT-I, CFT-D)	+*	-		-
Continuous Visual Memory Test (CVMT)	+*	-*	*	+*
Denman Neuropsychology Memory Scale	*	ndetermin	*	+*
Expanded Paired Associate Test (EPAT)	+*	ndetermin	*	+*
Form Sequence Learning (FSL)	+*	ndetermin	*	+*
Hebb's Recurring Digits	+*	-*	-*	+*
Hopkins Verbal Learning Test	+*	ndetermin	*	+*
Inventory of Memory Experiences (IME)	+*	ndetermin	*	+*
Learning and Memory Battery (LAMB)	+*	ndetermin	*,+*	+*
Memory Assessment Clinics Self-Rating Scale (MAC-S)	+*	ndetermin	*	+*
Memory Assessment Scales (MAS)	+*	-	*	*
Memory for Designs Test (MFD)	+*	ndetermin	*	+*
Memory Functioning Questionnaire	+*	ndetermin	*	+*
Non-Language Paired Associate Learning Test	+*	ndetermin	*	+*
Recognition Memory Test (RMT)	+*	ndetermin	*	+*
Rey Auditory Verbal Learning	+*	-*	*	+*

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Disability	Computer	Verification of Effort	
NIMH Core Neuropsychological Battery				
Peabody Individual Achievement Test (PIAT, PIAT-R)				
Pittsburgh Occupation Exposures Test (POET)	+*	Undetermined		
Primary Mental Abilities (PMA)	+*	Undetermined		
Rancho Los Amigos Scale: Levels of Cognitive Functioning	+*	Undetermined		
S.O.N.R. 5 1/2-17	+*			
Slosson Intelligence Test	+*	Undetermined		
Stanford-Binet Intelligence Scale	+*	-*		
Wechsler Adult Intelligence Scales (WAIS, WAIS-R)	*	+*		
Woodcock-Johnson Psycho-Educational Battery-Revised (WJ-R)	+*	Undetermined		
B. Memory				
Auditory-Verbal Learning Test (AVLT)	*	-		
Autobiographical Memory Interview (AMI)	+*	-		
Babcock Story Recall Test	+*	Undetermined		
Biber Figure Learning Test (BFLT)	+*	Undetermined		
California Discourse Memory Test (CDMT)	+*	Undetermined		
California Verbal Learning Test (CVLT), Adult Version	*	-		
Complex Figure Test: Recall Administration (CFT-I, CFT-D)	-	-		
Continuous Visual Memory Test (CVMT)	+*	Undetermined		
Denman Neuropsychology Memory Scale	+*	Undetermined		
Expanded Paired Associate Test (EPAT)	+*	*		
Form Sequence Learning (FSL)	+*	+*		
Hebb's Recurring Digits	+*	+*		
Hopkins Verbal Learning Test	+*	Undetermined		
Inventory of Memory Experiences (IME)	+*	+*		
Learning and Memory Battery (LAMB)	+*	Undetermined		
Memory Assessment Clinics Self-Rating Scale (MAC-S)	+*	+*		
Memory Assessment Scales (MAS)	*	-		
Memory for Designs Test (MFD)	+*	Undetermined		
Memory Functioning Questionnaire	+*	+*		
Non-Language Paired Associate Learning Test	+*	Undetermined		
Recognition Memory Test (RMT)	+*	Undetermined		
Rey Auditory Verbal Learning	+*	*		

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Instrument Purpose	Information Source	Primary Reason not Selected
Rey's Visual Design Learning Test (RVDLT)	general	pt/other	Absence of Reliability / Validity
Rivermead Behavioral Memory Test (RBMT)	general	pt/other	Not generalizable to SSA programs
Subjective Memory Questionnaire (SMQ)	general	patient	Not generalizable to SSA programs
Tactile Pattern Recognition	general	other/pt	Absence of Reliability / Validity
Visual Paired Associates	general	other/pt	Not generalizable to SSA programs
Visual Reproduction	general	other/pt	Not generalizable to SSA programs
Visual Spatial Learning Test (VSLT)	general	other/pt	Not generalizable to SSA programs
Wechsler Memory Scales (WMS-I, WMS-II, WMS-R)	general	other/pt	Not generalizable to SSA programs
C. Verbal Functions and Language Skills			
Aphasia Language Performance Scales (ALPS)	specific	pt/other	Specificity of functions
Aphasia Screening Test	specific	pt/other	Specificity of functions
Communication Abilities in Daily Living (CADL)	specific	patient	Specificity of functions
Functional Communication Profile (FCP)	specific	other	Specificity of functions
Gates-MacGinitie Reading Tests, 2nd Ed.	general	patient	Not generalizable to SSA programs
Johns Hopkins University Dysgraphia Battery	general	ot/other	Absence of Reliability / Validity
Minnesota Test for Differential Diagnosis of Aphasia (Rev. Ed.)	specific	pt/other	Specificity of functions
Multilingual Aphasia Examination (MAE)	specific	other/pt	Specificity of functions
National Adult Reading Test (NART)	general	other/pt	Not generalizable to SSA programs
Neurosensory Center Comprehensive Examination for Aphasia (NCCEA)	general	other/pt	Not generalizable to SSA programs
North American Adult Reading Test (NAART, NART-R)	general	other/pt	Not generalizable to SSA programs
Object Naming Test	general	other/pt	Absence of Reliability / Validity
Peabody Picture Vocabulary Test (PPVT-R)	general	patient	Not generalizable to SSA programs
Porch Index of Communicative Ability (PICA)	general	test admin	Not generalizable to SSA programs
Real World Spelling Test	specific	other/pt	Specificity of functions
Thurstone Word Fluency Test (TWFT)	general	other/pt	Not generalizable to SSA programs
Token Test	general	patient	Not generalizable to SSA programs
Western Aphasia Battery	general	test admin	Specificity of functions
D. Construction			
Bender-Gestalt Test	general	psych/pt	Not generalizable to SSA programs
Block Design	general	other/pt	Not generalizable to SSA programs
Canter Background Interference Procedure (BIP)	general	other/pt	Not generalizable to SSA programs

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Reliability	Validity	Feasibility: Availability	Feasibility: Safety	Feasibility: Invasiveness
Rey's Visual Design Learning Test (RVDLT)	not found	not found	+*	+*	-*
Rivermead Behavioral Memory Test (RBMT)	found	found	+*	+*	-*
Subjective Memory Questionnaire (SMQ)	found	found	+*	+*	-*,*
Tactile Pattern Recognition	not found	not found	+*	+*	-*
Visual Paired Associates	found	found	+*	+*	-*
Visual Reproduction	found	found	+*	+*	-*
Visual Spatial Learning Test (VSLT)	found	found	+*	+*	-*
Wechsler Memory Scales (WMS-I, WMS-II, WMS-R)	found	found	+*	+*	-*
C. Verbal Functions and Language Skills					
Aphasia Language Performance Scales (ALPS)	not found	found	+*	+*	-*
Aphasia Screening Test	found	found	+*	+*	-*
Communication Abilities in Daily Living (CADL)	X	X	*	+*	-
Functional Communication Profile (FCP)	not found	not found	+*	+*	-*
Gates-MacGinitie Reading Tests, 2nd Ed.	found	found	+*	+*	-*
Johns Hopkins University Dysgraphia Battery	not found	not found	undetermine	+*	-*
Minnesota Test for Differential Diagnosis of Aphasia (Rev. Ed.)	found	found	+*	+*	-*
Multilingual Aphasia Examination (MAE)	found	found	+*	+*	-*
National Adult Reading Test (NART)	found	found	+*	+*	-*
Neurosensory Center Comprehensive Examination for Aphasia (NCCEA)	found	found	+*	+*	-*
North American Adult Reading Test (NAART, NART-R)	found	found	+*	+*	-*
Object Naming Test	not found	not found	+*	+*	-*
Peabody Picture Vocabulary Test (PPVT-R)	X	X	+*	+*	-*
Porch Index of Communicative Ability (PICA)	X	X	*	*	-
Real World Spelling Test	not found	not found	+*	+*	-*
Thurstone Word Fluency Test (TWFT)	found	found	+*	+*	-*
Token Test	X	X	+*	+*	-*
Western Aphasia Battery	X	X	*	*	-
D. Construction					
Bender-Gestalt Test	found	found	+*	+*	-*
Block Design	found	found	+*	+*	-*
Canter Background Interference Procedure (BIP)	found	found	+*	+*	-*

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Ease of administration	Cost	Time Requirements	Generalizability Language
Rey's Visual Design Learning Test (RVDLT)	+*	ndetermin	*	+*
Rivermead Behavioral Memory Test (RBMT)	+*	ndetermin	*	*
Subjective Memory Questionnaire (SMQ)	+*	ndetermin	-*	+*
Tactile Pattern Recognition	+*	ndetermin	*	+*
Visual Paired Associates	+*	*	-*	+*
Visual Reproduction	+*	*	*	+*
Visual Spatial Learning Test (VSLT)	+*	ndetermin	*	+*
Wechsler Memory Scales (WMS-I, WMS-II, WMS-R)	*	*	+*	+*
C. Verbal Functions and Language Skills				
Aphasia Language Performance Scales (ALPS)	+*	ndetermin	*	+*
Aphasia Screening Test	+*	ndetermin	*	+*
Communication Abilities in Daily Living (CADL)	+*	-		+*
Functional Communication Profile (FCP)	+*	ndetermin	*	+*
Gates-MacGinitie Reading Tests, 2nd Ed.	+*	ndetermin	*,+*	+*
Johns Hopkins University Dysgraphia Battery	+*	ndetermin	*	+*
Minnesota Test for Differential Diagnosis of Aphasia (Rev. Ed.)	*	ndetermin	*,+*	+*
Multilingual Aphasia Examination (MAE)	+*	ndetermin	*	+*
National Adult Reading Test (NART)	+*	ndetermin	*	+*
Neurosensory Center Comprehensive Examination for Aphasia (NCCEA)	+*	ndetermin	*	+*
North American Adult Reading Test (NAART, NART-R)	+*	ndetermin	*	+*
Object Naming Test	+*	ndetermin	*	+*
Peabody Picture Vocabulary Test (PPVT-R)	+*	-		*
Porch Index of Communicative Ability (PICA)	*	-		-
Real World Spelling Test	+*	ndetermin	*	+*
Thurstone Word Fluency Test (TWFT)	+*	low	-*	+*
Token Test	+*	-		*
Western Aphasia Battery	-*	-		-
D. Construction				
Bender-Gestalt Test	*	-*	*	+*
Block Design	+*	*	*	*
Canter Background Interference Procedure (BIP)	+*	-*	*	+*

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Disability	Computer	Verification of Effort
Rey's Visual Design Learning Test (RVDLT)	+*	*	
Rivermead Behavioral Memory Test (RBMT)	+*	-*	
Subjective Memory Questionnaire (SMQ)	+*	+*	
Tactile Pattern Recognition	+*	-*	
Visual Paired Associates	+*	+*	
Visual Reproduction	+*	undetermined	
Visual Spatial Learning Test (VSLT)	+*	undetermined	
Wechsler Memory Scales (WMS-I, WMS-II, WMS-R)	+*	undetermined	
C. Verbal Functions and Language Skills			
Aphasia Language Performance Scales (ALPS)	undetermine	undetermined	
Aphasia Screening Test	undetermine	undetermined	
Communication Abilities in Daily Living (CADL)	-	-	
Functional Communication Profile (FCP)	undetermine	-*	
Gates-MacGinitie Reading Tests, 2nd Ed.	+*	*	
Johns Hopkins University Dysgraphia Battery	+*	undetermined	
Minnesota Test for Differential Diagnosis of Aphasia (Rev. Ed.)	+*	undetermined	
Multilingual Aphasia Examination (MAE)	+*	undetermined	
National Adult Reading Test (NART)	+*	undetermined	
Neurosensory Center Comprehensive Examination for Aphasia (NCCEA)	+*	undetermined	
North American Adult Reading Test (NAART, NART-R)	+*	undetermined	
Object Naming Test	+*	undetermined	
Peabody Picture Vocabulary Test (PPVT-R)	*	-	
Porch Index of Communicative Ability (PICA)	-	-	
Real World Spelling Test	+*	undetermined	
Thurstone Word Fluency Test (TWFT)	+*	undetermined	
Token Test	-	-	
Western Aphasia Battery	-	-	
D. Construction			
Bender-Gestalt Test	+*	*	
Block Design	*	undetermined	
Canter Background Interference Procedure (BIP)	+*	undetermined	

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Instrument Purpose	Information Source	Primary Reason not Selected
Developmental Test of Visual-Motor Integration (Beery VMI)	general	other/pt	Not generalizable to SSA programs
Kohs Block Design Test	general	other/pt	Not generalizable to SSA programs
E. Concept Formation and Reasoning			
Abstract Words Test	specific	other/pt	Specificity of functions
Abstraction Subtest, Shipley Institute of Living Scale	general	other/pt	Not generalizable to SSA programs
California Proverbs Test (CPT)	general	other/pt	Not generalizable to SSA programs
Kasanin-Hanfmann Concept Formation Test	general	other/pt	Absence of Reliability / Validity
Luria's Methods for Examining Concept Formation	general	other/pt	Absence of Reliability / Validity
Modified Vygotsky Concept Formation Test (MVCFT)	general	other/pt	Absence of Reliability / Validity
Object Sorting Test	general	other/pt	Not generalizable to SSA programs
Raven's Colored Progressive Matrices (RCPM)	general	other/pt	Not generalizable to SSA programs
Raven's Progressive Matrices (RPM)	general	other/pt	Not generalizable to SSA programs
Timed Card-Sorting Test (TCST)	general	other/pt	Not generalizable to SSA programs
Wisconsin Card Sorting Test (WCST)	general	other/pt	Not generalizable to SSA programs
F. Executive Functions and Motor Performance			
Behavioral Assessment for Vocational Skills (BAVS): Wheelbarrow Test	general	patient	Not generalizable to SSA programs
Executive Function Route-Finding Task (EFRT)	general	other/pt	Not generalizable to SSA programs
Graphic Pattern Generation (GPG)	general	other/pt	Not generalizable to SSA programs
Grooved Pegboard	general	other/pt	Not generalizable to SSA programs
MacQuarrie Test for Mechanical Ability	general	other/pt	Not generalizable to SSA programs
Porteus Maze Test	general	other/pt	Not generalizable to SSA programs
Purdue Pegboard Test	general	other/pt	Not generalizable to SSA programs
Random Generation Task	general	other/pt	Absence of Reliability / Validity
Ruff Figural Fluency Test (RFFT)	general	other/pt	Not generalizable to SSA programs
G. Assessment of Brain Damage			
Coma Recovery Scale (CRS)			Not generalizable to SSA programs
Coma, Near-Coma Scale (CNC)			Not generalizable to SSA programs
Current Personality Profile and Subjective and Objective Burden Questic	specific	family/pt/other	Intrusive
Galveston Orientation and Amnesia Test	specific	doc/other	Specificity of functions

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Reliability	Validity	Feasibility: Availability	Safety	Invasiveness
Developmental Test of Visual-Motor Integration (Beery VMI)	found	found	+*	+*	-*
Kohs Block Design Test	found	found	+*	+*	-*
E. Concept Formation and Reasoning					
Abstract Words Test	not found	not found	+*	+*	-*
Abstraction Subtest, Shipley Institute of Living Scale	found	found	+*	+*	-*
California Proverbs Test (CPT)	found	found	+*	+*	-*
Kasanin-Hanfmann Concept Formation Test	not found	not found	+*	+*	-*
Luria's Methods for Examining Concept Formation	not found	not found	undetermine	+*	-*
Modified Vygotsky Concept Formation Test (MVCFT)	not found	not found	undetermine	+*	-*
Object Sorting Test	found	found	+*	+*	-*
Raven's Colored Progressive Matrices (RCPM)	found	found	+*	+*	-*
Raven's Progressive Matrices (RPM)	found	found	+*	+*	-*
Timed Card-Sorting Test (TCST)	found	found	+*	+*	-*
Wisconsin Card Sorting Test (WCST)	found	found	+*	+*	+*
F. Executive Functions and Motor Performance					
Behavioral Assessment for Vocational Skills (BAVS): Wheelbarrow Test	X	X	*	+*	-*
Executive Function Route-Finding Task (EFRT)	found	found	+*	+*	-*
Graphic Pattern Generation (GPG)	found	found	+*	+*	-*
Grooved Pegboard	found	found	+*	+*	-*
MacQuarrie Test for Mechanical Ability	found	found	+*	+*	-*
Porteus Maze Test	found	found	+*	+*	-*
Purdue Pegboard Test	found	found	+*	+*	-*
Random Generation Task	not found	not found	undetermine	+*	-*
Ruff Figural Fluency Test (RFFT)	found	found	+*	+*	-*
G. Assessment of Brain Damage					
Coma Recovery Scale (CRS)					
Coma, Near-Coma Scale (CNC)					
Current Personality Profile and Subjective and Objective Burden Questic	not found	not found	undetermine	+*	*/+*
Galveston Orientation and Amnesia Test	found	found	+*	+*	-*

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Ease of administration	Cost	Time Requirements	Generalizability Language
Developmental Test of Visual-Motor Integration (Beery VMI)	+*	ndetermin	*	+*
Kohs Block Design Test	+*	ndetermin	*	+*
E. Concept Formation and Reasoning				
Abstract Words Test	+*	-*	-*	+*
Abstraction Subtest, Shipley Institute of Living Scale	+*	-*	*	+*
California Proverbs Test (CPT)	+*	-*	*	+*
Kasanin-Hanfmann Concept Formation Test	+*	ndetermin	*	+*
Luria's Methods for Examining Concept Formation	*	ndetermin	*	+*
Modified Vygotsky Concept Formation Test (MVCFT)	*	ndetermin	*	+*
Object Sorting Test	*	ndetermin	*	+*
Raven's Colored Progressive Matrices (RCPM)	+*	ndetermin	*	+*
Raven's Progressive Matrices (RPM)	+*	ndetermin	*	+*
Timed Card-Sorting Test (TCST)	+*	ndetermin	*	+*
Wisconsin Card Sorting Test (WCST)	*	*	*	+*
F. Executive Functions and Motor Performance				
Behavioral Assessment for Vocational Skills (BAVS): Wheelbarrow Test	*	-		-
Executive Function Route-Finding Task (EFRT)	+*	-*	*	+*
Graphic Pattern Generation (GPG)	+*	ndetermin	-*	+*
Grooved Pegboard	+*	-*	-*	+*
MacQuarrie Test for Mechanical Ability	+*	ndetermin	*	+*
Porteus Maze Test	*	ndetermin	*	+*
Purdue Pegboard Test	+*	-*	-*	+*
Random Generation Task	+*	ndetermin	*	+*
Ruff Figural Fluency Test (RFFT)	+*	-*	-*	+*
G. Assessment of Brain Damage				
Coma Recovery Scale (CRS)				
Coma, Near-Coma Scale (CNC)				
Current Personality Profile and Subjective and Objective Burden Questic	+*	ndetermin	*	+*
Galveston Orientation and Amnesia Test	+*	-*	-*	+*

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Disability	Computer	Verification of Effort	
Developmental Test of Visual-Motor Integration (Beery VMI)	+*	+*		
Kohs Block Design Test	+*	Undetermined		
E. Concept Formation and Reasoning				
Abstract Words Test	+*	*		
Abstraction Subtest, Shipley Institute of Living Scale	+*	Undetermined		
California Proverbs Test (CPT)	+*	Undetermined		
Kasanin-Hanfmann Concept Formation Test	+*	Undetermined		
Luria's Methods for Examining Concept Formation	+*	Undetermined		
Modified Vygotsky Concept Formation Test (MVCFT)	*	Undetermined		
Object Sorting Test	+*	Undetermined		
Raven's Colored Progressive Matrices (RCPM)	+*	+*		
Raven's Progressive Matrices (RPM)	+*	+*		
Timed Card-Sorting Test (TCST)	+*	+*		
Wisconsin Card Sorting Test (WCST)	+*	+*		
F. Executive Functions and Motor Performance				
Behavioral Assessment for Vocational Skills (BAVS): Wheelbarrow Test	-	-		
Executive Function Route-Finding Task (EFRT)	+*	-*		
Graphic Pattern Generation (GPG)	+*	*		
Grooved Pegboard	+*	-*		
MacQuarrie Test for Mechanical Ability	+*	-*		
Porteus Maze Test	+*	Undetermined		
Purdue Pegboard Test	+*	-*		
Random Generation Task	+*	Undetermined		
Ruff Figural Fluency Test (RFFT)	+*	Undetermined		
G. Assessment of Brain Damage				
Coma Recovery Scale (CRS)				
Coma, Near-Coma Scale (CNC)				
Current Personality Profile and Subjective and Objective Burden Questic	+*	+*		
Galveston Orientation and Amnesia Test	+*	-*		

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Instrument Purpose	Information Source	Primary Reason not Selected
Glasgow Outcome Scale (GOS)	specific	other	Specificity of functions
Mini Inventory of Right Brain Injury (MIRBI)	specific	other	Specificity of functions
Questionnaire for Evaluating Posttraumatic Amnesia	specific	other/pt	Specificity of functions
Rancho Los Amigos Scale	specific	other	Specificity of functions
Sensory Stimulation Assessment Scale	specific	other	Specificity of functions
Severe Impairment Battery (SIB)	specific	patient	Specificity of functions
H. Other			
High Sensitivity Cognitive Screen (HSCS)	general	other/pt	Not generalizable to SSA programs
III. Non-Cognitive Mental Impairment			
A. Global Measures of Non-Cognitive Mental Functioning			
Canadian Neurological Scaled	general	undetermined	Limited availability
B. Orientation			
Discrimination of Recency	general	patient	Not generalizable to SSA programs
Galveston Orientation and Amnesia Test (GOAT)	undetermined	undetermined	No research base
Laterality Discrimination Test	general	patient	Absence of Reliability / Validity
McLaughlin Index	undetermined	undetermined	No research base
Mental Re-orientation	undetermined	undetermined	No research base
Personal Orientation Test	general	pt	Not generalizable to SSA programs
Right-Left Orientation Test (RLOT)	specific	pt	Specificity of functions
Spatial Orientation Memory Test	specific	patient	Specificity of functions
Standardized Road-Map Test of Direction Sense	undetermined	undetermined	No research base
Tactile Finger Recognition	undetermined	undetermined	No research base
Temporal Disorientation Questionnaire	undetermined	undetermined	No research base
Tests of Geographic Orientation	undetermined	undetermined	No research base
Topographical Localization	undetermined	undetermined	No research base
C. Attention, Concentration, and Tracking			

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Reliability	Validity	Feasibility: Availability	Safety	Invasiveness
Glasgow Outcome Scale (GOS)	found	found	+*	+*	-*
Mini Inventory of Right Brain Injury (MIRBI)	found	found	+*	+*	-*
Questionnaire for Evaluating Posttraumatic Amnesia	not found	not found	+*	+*	-*
Rancho Los Amigos Scale	found	found	+*	+*	-*
Sensory Stimulation Assessment Scale	not found	not found	undetermine	+*	-*
Severe Impairment Battery (SIB)	X	X	+*	+*	-*
H. Other					
High Sensitivity Cognitive Screen (HSCS)	found	found	+*	+*	undetermined
III. Non-Cognitive Mental Impairment					
A. Global Measures of Non-Cognitive Mental Functioning					
Canadian Neurological Scaled	X	X	*	*	*
B. Orientation					
Discrimination of Recency	found	found	+*	+*	-*
Galveston Orientation and Amnesia Test (GOAT)	undetermine	undetermin	undetermine	undeterm	undetermined
Laterality Discrimination Test	not found	found	+*	+*	-*
McLaughlin Index	undetermine	undetermin	undetermine	undeterm	undetermined
Mental Re-orientation	undetermine	undetermin	+*	+*	-*
Personal Orientation Test	found	found	undetermine	undeterm	undetermined
Right-Left Orientation Test (RLOT)	not found	not found	+*	+*	-*
Spatial Orientation Memory Test	found	found	-*	+*	-*
Standardized Road-Map Test of Direction Sense	undetermine	undetermin	undetermine	undeterm	undetermined
Tactile Finger Recognition	undetermine	undetermin	undetermine	undeterm	undetermined
Temporal Disorientation Questionnaire	undetermine	undetermin	undetermine	undeterm	undetermined
Tests of Geographic Orientation	undetermine	undetermin	undetermine	undeterm	undetermined
Topographical Localization	undetermine	undetermin	undetermine	undeterm	undetermined
C. Attention, Concentration, and Tracking					

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Ease of administration	Cost	Time Requirements	Generalizability Language
Glasgow Outcome Scale (GOS)	+*	-*	-*	+*
Mini Inventory of Right Brain Injury (MIRBI)	+*	-*	-*	+*
Questionnaire for Evaluating Posttraumatic Amnesia	+*	-*	-*	+*
Rancho Los Amigos Scale	+*	-*	-*	+*
Sensory Stimulation Assessment Scale	undetermined	ndetermin	undetermined	+*
Severe Impairment Battery (SIB)	+*	-*		*
H. Other				
High Sensitivity Cognitive Screen (HSCS)	+*	-*	*	+*
III. Non-Cognitive Mental Impairment				
A. Global Measures of Non-Cognitive Mental Functioning				
Canadian Neurological Scaled	+*	-		-
B. Orientation				
Discrimination of Recency	+*	-*	-*	undetermined
Galveston Orientation and Amnesia Test (GOAT)	undetermined	undeterm	undetermined	undetermined
Laterality Discrimination Test	+*	-*	-*	undetermined
McLaughlin Index	undetermined	undeterm	undetermined	undetermined
Mental Re-orientation	+*	-*	-*	*
Personal Orientation Test	undetermined	undeterm	undetermined	undetermined
Right-Left Orientation Test (RLOT)	+*	*	-*	undetermined
Spatial Orientation Memory Test	-*	+*	*	undetermined
Standardized Road-Map Test of Direction Sense	undetermined	undeterm	undetermined	undetermined
Tactile Finger Recognition	undetermined	undeterm	undetermined	undetermined
Temporal Disorientation Questionnaire	undetermined	undeterm	undetermined	undetermined
Tests of Geographic Orientation	undetermined	undeterm	undetermined	undetermined
Topographical Localization	undetermined	undeterm	undetermined	undetermined
C. Attention, Concentration, and Tracking				

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Disability	Computer	Verification of Effort	
Glasgow Outcome Scale (GOS)	+*	-*		
Mini Inventory of Right Brain Injury (MIRBI)	+*	-*		
Questionnaire for Evaluating Posttraumatic Amnesia	+*	+*		
Rancho Los Amigos Scale	+*	-*		
Sensory Stimulation Assessment Scale	ndetermine	-*		
Severe Impairment Battery (SIB)		-		
H. Other				
High Sensitivity Cognitive Screen (HSCS)	+*	ndetermined		
III. Non-Cognitive Mental Impairment				
A. Global Measures of Non-Cognitive Mental Functioning				
Canadian Neurological Scaled	-	-		
B. Orientation				
Discrimination of Recency	ndetermine	ndetermine	*	
Galveston Orientation and Amnesia Test (GOAT)	undetermin	undetermin	undetermined	
Laterality Discrimination Test	ndetermine	ndetermine	*	
McLaughlin Index	undetermin	undetermin	undetermined	
Mental Re-orientation	ndetermine	ndetermine	undetermined	
Personal Orientation Test	undetermin	undetermin	undetermined	
Right-Left Orientation Test (RLOT)	ndetermine	ndetermine	undetermined	
Spatial Orientation Memory Test	ndetermine	ndetermine	undetermined	
Standardized Road-Map Test of Direction Sense	undetermin	undetermin	undetermined	
Tactile Finger Recognition	undetermin	undetermin	undetermined	
Temporal Disorientation Questionnaire	undetermin	undetermin	undetermined	
Tests of Geographic Orientation	undetermin	undetermin	undetermined	
Topographical Localization	undetermin	undetermin	undetermined	
C. Attention, Concentration, and Tracking				

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Instrument Purpose	Information Source	Primary Reason not Selected
Attentional Capacity Test	undetermined	undetermined	No research base
Digit span tests: Repeating of Digits Forward and Backwards	general	pt	Absence of Reliability / Validity
Extended Mental Control Test (EMC)	undetermined	undetermined	No research base
Knox Cube Test (KCT) (Arthur Point Scale of Performance battery)	undetermined	undetermined	No research base
Mental Control (WMS, WMS-R)	specific	pt/doctor	Specificity of functions
Perceptual Speed (PS)	specific	pt	Specificity of functions
Sentence Repetition (1)	undetermined	undetermined	No research base
Sentence Repetition (2)	undetermined	undetermined	No research base
Sequential Operations Series	undetermined	undetermined	No research base
Stroop Color and Word Test	general	patient	Absence of Reliability / Validity
Symbol Digit Modalities Test (SDMT)	undetermined	undetermined	No research base
Test of Sustained Attention and Tracking (TSAT)	undetermined	undetermined	No research base
Trail Making Test	specific	pt	Specificity of functions
Visual Search and Attention Test	general	pt	Not generalizable to SSA programs
D. Visual Perception			
A Matching Test for Visual Inattention	undetermined	undetermined	No research base
Behavioral Inattention Test (BIT)	specific	pt	Specificity of functions
Black Pattern Analysis Test (BPAT)	undetermined	undetermined	No research base
Closure Speed (Gestalt Completion)	general	pt	Not generalizable to SSA programs
Color Vision Screening Inventory	undetermined	undetermined	No research base
Farnswoth Panel D-15 Test	undetermined	undetermined	No research base
Gollin Figures	undetermined	undetermined	No research base
Hidden Figures Test	undetermined	undetermined	No research base
Hooper Visual Organization Test (HVOT)	specific	pt	Specificity of functions
Judgement of Line Orientation (JLO)	specific	pt	Specificity of functions
Minnesota Paper Form Board Test	undetermined	undetermined	No research base
Overlapping Figures Tests	undetermined	undetermined	No research base
Perceptual Speed (Identical Forms)	specific	pt	Specificity of functions
Picture Scanning	undetermined	undetermined	No research base
Southern California Figure-Ground Visual Perception Test	undetermined	undetermined	No research base
Star Cancellation	undetermined	undetermined	No research base
Verbal and Nonverbal Cancellation Tasks	general	doctor	Absence of Reliability / Validity
Visual Object and Space Perception Test	undetermined	undetermined	No research base

Functional Assessment Instruments and Methods

Not Selected for Further Review

by Unit of Analysis

Instrument Category / Instrument Name	Reliability	Validity	Feasibility: Availability	Feasibility: Safety	Feasibility: Invasiveness
Attentional Capacity Test	undetermine	undetermin	undetermine	undeterm	undetermined
Digit span tests: Repeating of Digits Forward and Backwards	not found	not found	+*	+*	-*
Extended Mental Control Test (EMC)	undetermine	undetermin	undetermine	undeterm	undetermined
Knox Cube Test (KCT) (Arthur Point Scale of Performance battery)	undetermine	undetermin	undetermine	undeterm	undetermined
Mental Control (WMS, WMS-R)	found	found	*	+*	-*
Perceptual Speed (PS)	not found	not found	+*	+*	-*
Sentence Repetition (1)	undetermine	undetermin	undetermine	undeterm	undetermined
Sentence Repetition (2)	undetermine	undetermin	undetermine	undeterm	undetermined
Sequential Operations Series	undetermine	undetermin	undetermine	undeterm	undetermined
Stroop Color and Word Test	not found	not found	+*	+*	-*
Symbol Digit Modalities Test (SDMT)	undetermine	undetermin	undetermine	undeterm	undetermined
Test of Sustained Attention and Tracking (TSAT)	undetermine	undetermin	undetermine	undeterm	undetermined
Trail Making Test	not found	not found	+*	+*	-*
Visual Search and Attention Test	not found	not found	undetermine	undeterm	undetermined
D. Visual Perception					
A Matching Test for Visual Inattention	undetermine	undetermin	undetermine	undeterm	undetermined
Behavioral Inattention Test (BIT)	not found	not found	undetermine	undeterm	undetermined
Black Pattern Analysis Test (BPAT)	undetermine	undetermin	undetermine	undeterm	undetermined
Closure Speed (Gestalt Completion)	found	found	+*	+*	-*
Color Vision Screening Inventory	undetermine	undetermin	undetermine	undeterm	undetermined
Farnswoth Panel D-15 Test	undetermine	undetermin	undetermine	undeterm	undetermined
Gollin Figures	undetermine	undetermin	undetermine	undeterm	undetermined
Hidden Figures Test	undetermine	undetermin	undetermine	undeterm	undetermined
Hooper Visual Organization Test (HVOT)	not found	not found	+*	+*	-*
Judgement of Line Orientation (JLO)	not found	not found	undetermine	+*	-*
Minnesota Paper Form Board Test	undetermine	undetermin	undetermine	undeterm	undetermined
Overlapping Figures Tests	undetermine	undetermin	undetermine	undeterm	undetermined
Perceptual Speed (Identical Forms)	not found	not found	+*	+*	-*
Picture Scanning	undetermine	undetermin	undetermine	undeterm	undetermined
Southern California Figure-Ground Visual Perception Test	undetermine	undetermin	undetermine	undeterm	undetermined
Star Cancellation	undetermine	undetermin	undetermine	undeterm	undetermined
Verbal and Nonverbal Cancellation Tasks	not found	not found	*	+*	-*
Visual Object and Space Perception Test	undetermine	undetermin	undetermine	undeterm	undetermined

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Ease of administration	Cost	Time Requirements	Generalizability Language
Attentional Capacity Test	undetermined	undeterm	undetermined	undetermined
Digit span tests: Repeating of Digits Forward and Backwards	+*	-*	-*	+*
Extended Mental Control Test (EMC)	undetermined	undeterm	undetermined	undetermined
Knox Cube Test (KCT) (Arthur Point Scale of Performance battery)	undetermined	undeterm	undetermined	undetermined
Mental Control (WMS, WMS-R)	*	*	-*	undetermined
Perceptual Speed (PS)	+*	-*	-*	undetermined
Sentence Repetition (1)	undetermined	undeterm	undetermined	undetermined
Sentence Repetition (2)	undetermined	undeterm	undetermined	undetermined
Sequential Operations Series	undetermined	undeterm	undetermined	undetermined
Stroop Color and Word Test	+*	-*	-*	undetermined
Symbol Digit Modalities Test (SDMT)	undetermined	undeterm	undetermined	undetermined
Test of Sustained Attention and Tracking (TSAT)	undetermined	undeterm	undetermined	undetermined
Trail Making Test	+*	-*	-*	undetermined
Visual Search and Attention Test	undetermined	undeterm	undetermined	undetermined
D. Visual Perception				
A Matching Test for Visual Inattention	undetermined	undeterm	undetermined	undetermined
Behavioral Inattention Test (BIT)	undetermined	undeterm	undetermined	undetermined
Black Pattern Analysis Test (BPAT)	undetermined	undeterm	undetermined	undetermined
Closure Speed (Gestalt Completion)	+*	-*	-*	+*
Color Vision Screening Inventory	undetermined	undeterm	undetermined	undetermined
Farnswoth Panel D-15 Test	undetermined	undeterm	undetermined	undetermined
Gollin Figures	undetermined	undeterm	undetermined	undetermined
Hidden Figures Test	undetermined	undeterm	undetermined	undetermined
Hooper Visual Organization Test (HVOT)	+*	ndetermin	-*	undetermined
Judgement of Line Orientation (JLO)	+*	-*	-*	+*
Minnesota Paper Form Board Test	undetermined	undeterm	undetermined	undetermined
Overlapping Figures Tests	undetermined	undeterm	undetermined	undetermined
Perceptual Speed (Identical Forms)	+*	-*	-*	undetermined
Picture Scanning	undetermined	undeterm	undetermined	undetermined
Southern California Figure-Ground Visual Perception Test	undetermined	undeterm	undetermined	undetermined
Star Cancellation	undetermined	undeterm	undetermined	undetermined
Verbal and Nonverbal Cancellation Tasks	+*	ndetermin	*	undetermined
Visual Object and Space Perception Test	undetermined	ndetermin	undetermined	undetermined

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Disability	Computer	Verification of Effort
Attentional Capacity Test	undetermin	undetermin	undetermined
Digit span tests: Repeating of Digits Forward and Backwards	ndetermine	ndetermine	undetermined
Extended Mental Control Test (EMC)	undetermin	undetermin	undetermined
Knox Cube Test (KCT) (Arthur Point Scale of Performance battery)	undetermin	undetermin	undetermined
Mental Control (WMS, WMS-R)	ndetermine	ndetermine	*
Perceptual Speed (PS)	ndetermine	ndetermine	*
Sentence Repetition (1)	undetermin	undetermin	undetermined
Sentence Repetition (2)	undetermin	undetermin	undetermined
Sequential Operations Series	undetermin	undetermin	undetermined
Stroop Color and Word Test	ndetermine	ndetermine	undetermined
Symbol Digit Modalities Test (SDMT)	undetermin	undetermin	undetermined
Test of Sustained Attention and Tracking (TSAT)	undetermin	undetermin	undetermined
Trail Making Test	ndetermine	ndetermine	undetermined
Visual Search and Attention Test	undetermin	undetermin	undetermined
D. Visual Perception			
A Matching Test for Visual Inattention	undetermin	undetermin	undetermined
Behavioral Inattention Test (BIT)	undetermin	undetermin	undetermined
Black Pattern Analysis Test (BPAT)	undetermin	undetermin	undetermined
Closure Speed (Gestalt Completion)	ndetermine	ndetermine	undetermined
Color Vision Screening Inventory	undetermin	undetermin	undetermined
Farnswoth Panel D-15 Test	undetermin	undetermin	undetermined
Gollin Figures	undetermin	undetermin	undetermined
Hidden Figures Test	undetermin	undetermin	undetermined
Hooper Visual Organization Test (HVOT)	ndetermine	ndetermine	undetermined
Judgement of Line Orientation (JLO)	-*	ndetermine	+*
Minnesota Paper Form Board Test	undetermin	undetermin	undetermined
Overlapping Figures Tests	undetermin	undetermin	undetermined
Perceptual Speed (Identical Forms)	ndetermine	ndetermine	undetermined
Picture Scanning	undetermin	undetermin	undetermined
Southern California Figure-Ground Visual Perception Test	undetermin	undetermin	undetermined
Star Cancellation	undetermin	undetermin	undetermined
Verbal and Nonverbal Cancellation Tasks	ndetermine	ndetermine	undetermined
Visual Object and Space Perception Test	ndetermine	ndetermine	undetermined

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Instrument Purpose	Information Source	Primary Reason not Selected
E. Auditory Perception			
Auditory Reception (Illinois Test of Psycholinquistic Abilities)	specific	pt	Specificity of functions
Speech Sounds Perception Test	specific	pt/doctor	Specificity of functions
Wepman's Auditory Discrimination Test	specific	pt	Specificity of functions
F. Tactile Perception			
Fingertip Number-Writing Perception	undetermined	undetermined	No research base
Quality Extinction Test (QET)	undetermined	undetermined	No research base
Single and Double Simultaneous Stimulation Test (SDSS) also called Fa	undetermined	undetermined	No research base
G. Olfaction			
University of Pennsylvania Smell Identification Test (UPSIT)	undetermined	undetermined	No research base
H. Personal Adjustment/Psychological Well-Being			
Acceptance of Disability Scale			Not generalizable to SSA programs
Client Adjustment Rating Scales			Not generalizable to SSA programs
Cognitive Coping Strategies Inventory	specific	individual	Specificity of functions
Comprehensive Assessment and Referral Evaluation (CARE)			Not generalizable to SSA programs
Computerized TSBC/SRIC Planned-Access Observational Information System			Not generalizable to SSA programs
Cope Scale	general	individual	Intrusive
Coping Inventory for Stressful Situations (CISS)	general	patient	Not generalizable to SSA programs
Coping Resources Inventory (CRI)	general	patient	Not generalizable to SSA programs
Coping Strategy Indicator (CSI)	general	individual	Intrusive
Coping with Health, Injuries, and Problems Scale (CHIP)	general	individual	Not generalizable to SSA programs
Four Single Item Indicators of Well-Being			Not generalizable to SSA programs
General Well-Being Schedule (GWB)			Not generalizable to SSA programs
Global Assessment of Functioning			Not generalizable to SSA programs
Health Opinion Survey (HOS)			Not generalizable to SSA programs
Human Service Scale			Not generalizable to SSA programs

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Reliability	Validity	Feasibility: Availability	Safety	Invasiveness
E. Auditory Perception					
Auditory Reception (Illinois Test of Psycholinquistic Abilities)	not found	not found	*	+*	-*
Speech Sounds Perception Test	not found	not found	*	+*	*
Wepman's Auditory Discrimination Test	found	not found	+*	-*	-*
F. Tactile Perception					
Fingertip Number-Writing Perception	undetermine	undetermin	undetermine	undeterm	undetermined
Quality Extinction Test (QET)	undetermine	undetermin	undetermine	undeterm	undetermined
Single and Double Simultaneous Stimulation Test (SDSS) also called Fa	undetermine	undetermin	undetermine	undeterm	undetermined
G. Olfaction					
University of Pennsylvania Smell Identification Test (UPSIT)	undetermine	undetermin	undetermine	undeterm	undetermined
H. Personal Adjustment/Psychological Well-Being					
Acceptance of Disability Scale					
Client Adjustment Rating Scales					
Cognitive Coping Strategies Inventory	X	X	*	*	*
Comprehensive Assessment and Referral Evaluation (CARE)					
Computerized TSBC/SRIC Planned-Access Observational Information S					
Cope Scale	X	X	+*	+*	+*
Coping Inventory for Stressful Situations (CISS)	found	found	+*	+*	*
Coping Resources Inventory (CRI)	found	not found	*	+*	-*
Coping Strategy Indicator (CSI)	X	X	*	+*	+*
Coping with Health, Injuries, and Problems Scale (CHIP)	found	found	*	+*	*
Four Single Item Indicators of Well-Being					
General Well-Being Schedule (GWB)					
Global Assessment of Functioning					
Health Opinion Survey (HOS)					
Human Service Scale					

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Ease of administration	Cost	Time Requirements	Generalizability Language
E. Auditory Perception				
Auditory Reception (Illinois Test of Psycholinquistic Abilities)	+*	-*	-*	undetermined
Speech Sounds Perception Test	*	*	*	undetermined
Wepman's Auditory Discrimination Test	+*	-*	-*	undetermined
F. Tactile Perception				
Fingertip Number-Writing Perception	undetermined	undeterm	undetermined	undetermined
Quality Extinction Test (QET)	undetermined	undeterm	undetermined	undetermined
Single and Double Simultaneous Stimulation Test (SDSS) also called Fa	undetermined	undeterm	undetermined	undetermined
G. Olfaction				
University of Pennsylvania Smell Identification Test (UPSIT)	undetermined	undeterm	undetermined	undetermined
H. Personal Adjustment/Psychological Well-Being				
Acceptance of Disability Scale				
Client Adjustment Rating Scales				
Cognitive Coping Strategies Inventory	*	-	+*	-
Comprehensive Assessment and Referral Evaluation (CARE)				
Computerized TSBC/SRIC Planned-Access Observational Information S				
Cope Scale	-*	+*	+*	-
Coping Inventory for Stressful Situations (CISS)	+*		+*	
Coping Resources Inventory (CRI)	+*		+*	
Coping Strategy Indicator (CSI)	-*	+*	+*	-
Coping with Health, Injuries, and Problems Scale (CHIP)	+*		+*	
Four Single Item Indicators of Well-Being				
General Well-Being Schedule (GWB)				
Global Assessment of Functioning				
Health Opinion Survey (HOS)				
Human Service Scale				

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Disability	Computer	Verification of Effort
E. Auditory Perception			
Auditory Reception (Illinois Test of Psycholinquistic Abilities)	undetermine	undetermine	undetermined
Speech Sounds Perception Test	undetermine	undetermine	undetermined
Wepman's Auditory Discrimination Test	undetermine	undetermine	+*
F. Tactile Perception			
Fingertip Number-Writing Perception	undetermin	undetermin	undetermined
Quality Extinction Test (QET)	undetermin	undetermin	undetermined
Single and Double Simultaneous Stimulation Test (SDSS) also called Fa	undetermin	undetermin	undetermined
G. Olfaction			
University of Pennsylvania Smell Identification Test (UPSIT)	undetermin	undetermin	undetermined
H. Personal Adjustment/Psychological Well-Being			
Acceptance of Disability Scale			
Client Adjustment Rating Scales			
Cognitive Coping Strategies Inventory	-	-*	
Comprehensive Assessment and Referral Evaluation (CARE)			
Computerized TSBC/SRIC Planned-Access Observational Information S			
Cope Scale	-	-*	
Coping Inventory for Stressful Situations (CISS)		+*	
Coping Resources Inventory (CRI)		-*	
Coping Strategy Indicator (CSI)	-	-*	
Coping with Health, Injuries, and Problems Scale (CHIP)		-*	
Four Single Item Indicators of Well-Being			
General Well-Being Schedule (GWB)			
Global Assessment of Functioning			
Health Opinion Survey (HOS)			
Human Service Scale			

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Instrument Purpose	Information Source	Primary Reason not Selected
Index of Psychological Well-Being			Not generalizable to SSA programs
Miller Behavioral Style Scale (MBSS)	general	individual	Not generalizable to SSA programs
Philadelphia Geriatric Center Morale Scale			Not generalizable to SSA programs
Portland Adaptability Inventory (PAI)	specific	patient/physicia	Specificity of functions
Psychosocial Rating Scale (PRS)			Not generalizable to SSA programs
Quality of Life Index for Mental Health			Not generalizable to SSA programs
Scale for Assessment of Negative Symptoms			Not generalizable to SSA programs
Structured and Scaled Interview & Assessment	specific	individual	Specificity of functions
Subjective Well-Being			Not generalizable to SSA programs
Time-Sample Behavioral Checklist (TSBC)			Not generalizable to SSA programs
I. Depression and Other Mood Disorders			
Anxiety Disorders Interview Schedule-Revised	specific	staff	Specificity of functions
Anxiety Sensitivity Index	general	individual	Intrusive
Beck Anxiety Inventory (BAI)	general	patient	Not generalizable to SSA programs
Brief Depression Rating Scale			Not generalizable to SSA programs
California Psychological Inventory	specific	self-report	Specificity of functions
Center for Epidemiologic Studies Depression Scale (CES-D)	specific	patient	Intrusive
Child Behavior Profile			Not generalizable to SSA programs
Childhood Emotional Problems			Not generalizable to SSA programs
Children's Behavior - Parent Questionnaire			Not generalizable to SSA programs
Children's Behavior - Teacher Questionnaire			Not generalizable to SSA programs
Clinical Anxiety Scale			Not generalizable to SSA programs
Costello-Comrey Anxiety Scale	general	self-report	Intrusive
Depressive Experiences Questionnaire			Not generalizable to SSA programs
Diagnostic Interview Schedule			Not generalizable to SSA programs
Dysfunctional Attitude Scale	general	self-report	Intrusive
General Health Questionnaire (GHQ)			Not generalizable to SSA programs
Geriatric Depression Scale	specific	patient	Intrusive
Geriatric Mental Status Interview	general	staff/patient	Specificity of functions
Halifax Mental Status Scale	specific	staff	Specificity of functions
Hamilton Anxiety Rating Scale	specific	observer	Specificity of functions
Hamilton Depression Scale	specific	observer	Specificity of functions
Index of Self-Esteem	general	self-report	Intrusive

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Reliability	Validity	Feasibility: Availability	Feasibility: Safety	Feasibility: Invasiveness
Index of Psychological Well-Being					
Miller Behavioral Style Scale (MBSS)	X	X	*	*	*
Philadelphia Geriatric Center Morale Scale					
Portland Adaptability Inventory (PAI)	X	X	+*	+*	-*
Psychosocial Rating Scale (PRS)					
Quality of Life Index for Mental Health					
Scale for Assessment of Negative Symptoms					
Structured and Scaled Interview & Assessment	X	X	-	+*	-*
Subjective Well-Being					
Time-Sample Behavioral Checklist (TSBC)					
I. Depression and Other Mood Disorders					
Anxiety Disorders Interview Schedule-Revised	found	found		*	*
Anxiety Sensitivity Index	X	X	*	+*	+*
Beck Anxiety Inventory (BAI)	X	X	+*	+*	-*
Brief Depression Rating Scale					
California Psychological Inventory	found	found	*	+*	*
Center for Epidemiologic Studies Depression Scale (CES-D)	X	X	*	+*	+*
Child Behavior Profile					
Childhood Emotional Problems					
Children's Behavior - Parent Questionnaire					
Children's Behavior - Teacher Questionnaire					
Clinical Anxiety Scale					
Costello-Comrey Anxiety Scale	X	X	*	+*	+*
Depressive Experiences Questionnaire					
Diagnostic Interview Schedule					
Dysfunctional Attitude Scale	X	X	+*	+*	+*
General Health Questionnaire (GHQ)					
Geriatric Depression Scale	X	X	*	+*	+*
Geriatric Mental Status Interview	found	found	*	*	*
Halifax Mental Status Scale	found	found	*	+*	*
Hamilton Anxiety Rating Scale	found	found	*	+*	*
Hamilton Depression Scale	X	X	*	+*	*
Index of Self-Esteem	X	X	*	+*	+*

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Ease of administration	Cost	Time Requirements	Generalizability Language
Index of Psychological Well-Being				
Miller Behavioral Style Scale (MBSS)	-*	-		-
Philadelphia Geriatric Center Morale Scale				
Portland Adaptability Inventory (PAI)	+*	-		*
Psychosocial Rating Scale (PRS)				
Quality of Life Index for Mental Health				
Scale for Assessment of Negative Symptoms				
Structured and Scaled Interview & Assessment	+*	-		-
Subjective Well-Being				
Time-Sample Behavioral Checklist (TSBC)				
I. Depression and Other Mood Disorders				
Anxiety Disorders Interview Schedule-Revised	-*		-*	
Anxiety Sensitivity Index	+*		+*	
Beck Anxiety Inventory (BAI)	+*	-	+*	*
Brief Depression Rating Scale				
California Psychological Inventory			+*	
Center for Epidemiologic Studies Depression Scale (CES-D)	+*	-		-
Child Behavior Profile				
Childhood Emotional Problems				
Children's Behavior - Parent Questionnaire				
Children's Behavior - Teacher Questionnaire				
Clinical Anxiety Scale				
Costello-Comrey Anxiety Scale	-*	-		-
Depressive Experiences Questionnaire				
Diagnostic Interview Schedule				
Dysfunctional Attitude Scale	*	-		-
General Health Questionnaire (GHQ)				
Geriatric Depression Scale	+*	-	+*	-
Geriatric Mental Status Interview	-*		-*	
Halifax Mental Status Scale	*		-*	
Hamilton Anxiety Rating Scale	*		+*	+*
Hamilton Depression Scale	+*	-	+*	+*
Index of Self-Esteem	-*	-		-

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Disability	Computer	Verification of Effort	
Index of Psychological Well-Being				
Miller Behavioral Style Scale (MBSS)	-	-*		
Philadelphia Geriatric Center Morale Scale				
Portland Adaptability Inventory (PAI)	-	-		
Psychosocial Rating Scale (PRS)				
Quality of Life Index for Mental Health				
Scale for Assessment of Negative Symptoms				
Structured and Scaled Interview & Assessment	-	-		
Subjective Well-Being				
Time-Sample Behavioral Checklist (TSBC)				
I. Depression and Other Mood Disorders				
Anxiety Disorders Interview Schedule-Revised		-*		
Anxiety Sensitivity Index		-*		
Beck Anxiety Inventory (BAI)	*	-		
Brief Depression Rating Scale				
California Psychological Inventory				
Center for Epidemiologic Studies Depression Scale (CES-D)	-	-		
Child Behavior Profile				
Childhood Emotional Problems				
Children's Behavior - Parent Questionnaire				
Children's Behavior - Teacher Questionnaire				
Clinical Anxiety Scale				
Costello-Comrey Anxiety Scale	-	-		
Depressive Experiences Questionnaire				
Diagnostic Interview Schedule				
Dysfunctional Attitude Scale	-	-		
General Health Questionnaire (GHQ)				
Geriatric Depression Scale	-	-		
Geriatric Mental Status Interview				
Halifax Mental Status Scale		-*		
Hamilton Anxiety Rating Scale				
Hamilton Depression Scale	-	+*		
Index of Self-Esteem	-	-		

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Instrument Purpose	Information Source	Primary Reason not Selected
Interactive Observation Scale for Psychiatric Inpatients			Not generalizable to SSA programs
Mental Health Inventory (MHI)			Not generalizable to SSA programs
Patient's Behavior Assessment Schedule			Not generalizable to SSA programs
Penn State Worry Questionnaire	general	individual	Intrusive
Self-Esteem Rating Scale	general	self-report	Not generalizable to SSA programs
Self-Rating Anxiety Scale	general	self-report	Intrusive
Self-Rating Depression Scale	specific	self-report	Specificity of functions
Somatic, Cognitive, Behavioral Anxiety Inventory			Not generalizable to SSA programs
State-Trait Anxiety Inventory (STAI)	general	individual	Intrusive
Stressful Situations Questionnaire			Not generalizable to SSA programs
Symptom Checklist-90-Revised	general	self-report	Not generalizable to SSA programs
J. Schizophrenia and Other Psychiatric Disorders			
Columbia University Scale for Psychopathology			Not generalizable to SSA programs
Comprehensive Psychiatric Assessment			Not generalizable to SSA programs
Framingham Functional Assessment Scale			Other
Global Attainment Scale for Psychiatric Inpatients			Not generalizable to SSA programs
Hare Psychopathy Checklist-Revised	specific	other	Specificity of functions
M(Malingering) Test	specific	individual	Intrusive
Maudsley Obsessional-Compulsive Inventory (MOCI)	general	individual	Intrusive
Multnomah Community Ability Scale			Limited availability
Social Dysfunction and Aggression Scale			Not generalizable to SSA programs
Twenty-Two Item Screening Score of Psychiatric Symptoms			Not generalizable to SSA programs
Yale-Brown Obsessive Compulsive Scale (Y-BOCS)	specific	other	Intrusive
K. Personality Disorders			
Aggression Inventory			Not generalizable to SSA programs
Basic Personality Inventory	general	self-report	Not generalizable to SSA programs
Bender Visual Motor Gestalt Test	general	staff/patient	Not generalizable to SSA programs
Dimensional Assessment of Personality Pathology-Basic Questionnaire	specific	self-report	Intrusive
Millon Clinical Multiaxial Inventory-II	general	self-report	Not generalizable to SSA programs
Minnesota Multiphasic Personality Inventory	general	individual	Intrusive
Multidimensional Personality Questionnaire	general	self-report	Not generalizable to SSA programs

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Reliability	Validity	Feasibility: Availability	Safety	Invasiveness
Interactive Observation Scale for Psychiatric Inpatients					
Mental Health Inventory (MHI)					
Patient's Behavior Assessment Schedule					
Penn State Worry Questionnaire	X	X	*	+*	+*
Self-Esteem Rating Scale	X	X			
Self-Rating Anxiety Scale	X	X	*	+*	+*
Self-Rating Depression Scale	found	found	+*	+*	*
Somatic, Cognitive, Behavioral Anxiety Inventory					
State-Trait Anxiety Inventory (STAI)	X	X	+*	+*	+*
Stressful Situations Questionnaire					
Symptom Checklist-90-Revised	found	found	+*	+*	*
J. Schizophrenia and Other Psychiatric Disorders					
Columbia University Scale for Psychopathology					
Comprehensive Psychiatric Assessment					
Framingham Functional Assessment Scale					
Global Attainment Scale for Psychiatric Inpatients					
Hare Psychopathy Checklist-Revised	X	X	-*	*	-*
M(Malingering) Test	found	found	+*	+*	+*
Maudsley Obsessional-Compulsive Inventory (MOCI)	X	X	+*	+*	+*
Multnomah Community Ability Scale					
Social Dysfunction and Aggression Scale					
Twenty-Two Item Screening Score of Psychiatric Symptoms					
Yale-Brown Obsessive Compulsive Scale (Y-BOCS)	X	X	*	+*	+*
K. Personality Disorders					
Aggression Inventory					
Basic Personality Inventory	found	found	+*	+*	*
Bender Visual Motor Gestalt Test	found	found	+*	+*	*
Dimensional Assessment of Personality Pathology-Basic Questionnaire	found	found	*	+*	+*
Millon Clinical Multiaxial Inventory-II	found	found	+*	+*	*
Minnesota Multiphasic Personality Inventory	X	X	+*	+*	+*
Multidimensional Personality Questionnaire	found	found	*	+*	*

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Ease of administration	Cost	Time Requirements	Generalizability Language
Interactive Observation Scale for Psychiatric Inpatients				
Mental Health Inventory (MHI)				
Patient's Behavior Assessment Schedule				
Penn State Worry Questionnaire	-*	-	+*	-
Self-Esteem Rating Scale				
Self-Rating Anxiety Scale	-*	-		
Self-Rating Depression Scale	+*		+*	
Somatic, Cognitive, Behavioral Anxiety Inventory				
State-Trait Anxiety Inventory (STAI)	-*	-		*
Stressful Situations Questionnaire				
Symptom Checklist-90-Revised	+*		+*	
J. Schizophrenia and Other Psychiatric Disorders				
Columbia University Scale for Psychopathology				
Comprehensive Psychiatric Assessment				
Framingham Functional Assessment Scale				
Global Attainment Scale for Psychiatric Inpatients				
Hare Psychopathy Checklist-Revised	+*	-		-
M(Malingering) Test	-*	-	+*	
Maudsley Obsessional-Compulsive Inventory (MOCI)	-*	-		-
Multnomah Community Ability Scale				
Social Dysfunction and Aggression Scale				
Twenty-Two Item Screening Score of Psychiatric Symptoms				
Yale-Brown Obsessive Compulsive Scale (Y-BOCS)	+*	-		-
K. Personality Disorders				
Aggression Inventory				
Basic Personality Inventory	*		*	
Bender Visual Motor Gestalt Test	*		+*	
Dimensional Assessment of Personality Pathology-Basic Questionnaire	*	-	*	-
Millon Clinical Multiaxial Inventory-II	*		-*	
Minnesota Multiphasic Personality Inventory	*	-		-
Multidimensional Personality Questionnaire	*		*	

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Disability	Computer	Verification of Effort	
Interactive Observation Scale for Psychiatric Inpatients				
Mental Health Inventory (MHI)				
Patient's Behavior Assessment Schedule				
Penn State Worry Questionnaire	-	-*		
Self-Esteem Rating Scale		-		
Self-Rating Anxiety Scale	-	-		
Self-Rating Depression Scale	+*			
Somatic, Cognitive, Behavioral Anxiety Inventory				
State-Trait Anxiety Inventory (STAI)	-	-*		
Stressful Situations Questionnaire				
Symptom Checklist-90-Revised		+*		
J. Schizophrenia and Other Psychiatric Disorders				
Columbia University Scale for Psychopathology				
Comprehensive Psychiatric Assessment				
Framingham Functional Assessment Scale				
Global Attainment Scale for Psychiatric Inpatients				
Hare Psychopathy Checklist-Revised	-	-*		
M(Malingering) Test		-*		
Maudsley Obsessional-Compulsive Inventory (MOCI)	-	-*		
Multnomah Community Ability Scale				
Social Dysfunction and Aggression Scale				
Twenty-Two Item Screening Score of Psychiatric Symptoms				
Yale-Brown Obsessive Compulsive Scale (Y-BOCS)	-	-*		
K. Personality Disorders				
Aggression Inventory				
Basic Personality Inventory		+*		
Bender Visual Motor Gestalt Test	*	-*		
Dimensional Assessment of Personality Pathology-Basic Questionnaire	-	+*		
Millon Clinical Multiaxial Inventory-II		+*		
Minnesota Multiphasic Personality Inventory	-	+*		
Multidimensional Personality Questionnaire		+*		

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Instrument Purpose	Information Source	Primary Reason not Selected
Myers-Briggs Type Indicator	general	self-report	Not generalizable to SSA programs
NEO Personality Inventory-Revised (NEO PI-R)	general	individual	Intrusive
Personality Assessment Inventory (PAI)	general	self-report	Not generalizable to SSA programs
Personality Diagnostic Questionnaire-Revised	specific	self-report	Specificity of functions
Scale for the Assessment of Negative Symptoms			Not generalizable to SSA programs
Scale for the Assessment of Positive Symptoms			Not generalizable to SSA programs
Schedule for Nonadaptive and Adaptive Personality (SNAP)	general	individual	Intrusive
Symptom Questionnaire			
K. Eating Disorders			
Energy Expenditure	undetermined	undetermined	No research base
L. Activity/Sleep Disorders			
Motility Detection	undetermined	undetermined	No research base
Sleep Detection	undetermined	undetermined	No research base
M. Drug and Substance Abuse			
Alcohol Use Inventory	specific	individual	Specificity of functions
McMullen Addiction Thought Scale	undetermined	undetermined	No research base
Michigan Alcoholism Screening Test	specific	pt/doctor	Specificity of functions
N. Stress			
Index of Clinical Stress	undetermined	undetermined	No research base
Self-Control Schedule	undetermined	undetermined	No research base
O. Other			
Medical Outcomes Study (MOS) General Health Survey	undetermined	undetermined	No research base
Psychological Test Battery to Detect Faked Insanity	undetermined	undetermined	No research base
Structured Interview of Reported Symptoms	undetermined	undetermined	No research base

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Reliability	Validity	Feasibility: Availability	Feasibility: Safety	Feasibility: Invasiveness
Myers-Briggs Type Indicator	found	found	+*	+*	-*
NEO Personality Inventory-Revised (NEO PI-R)	X	X	+*	+*	+*
Personality Assessment Inventory (PAI)	found	found	*	+*	*
Personality Diagnostic Questionnaire-Revised	found	found	*	*	*
Scale for the Assessment of Negative Symptoms					
Scale for the Assessment of Positive Symptoms					
Schedule for Nonadaptive and Adaptive Personality (SNAP)	X	X	+*	+*	+*
Symptom Questionnaire					
K. Eating Disorders					
Energy Expenditure	undetermine	undetermin	undetermine	undeterm	undetermined
L. Activity/Sleep Disorders					
Motility Detection	undetermine	undetermin	undetermine	undeterm	undetermined
Sleep Detection	undetermine	undetermin	undetermine	undeterm	undetermined
M. Drug and Substance Abuse					
Alcohol Use Inventory		X	*	*	*
McMullen Addiction Thought Scale	undetermine	undetermin	undetermine	undeterm	undetermined
Michigan Alcoholism Screening Test	found	found	*	-*	*
N. Stress					
Index of Clinical Stress	undetermine	undetermin	undetermine	undeterm	undetermined
Self-Control Schedule	undetermine	undetermin	undetermine	undeterm	undetermined
O. Other					
Medical Outcomes Study (MOS) General Health Survey	undetermine	undetermin	undetermine	undeterm	undetermined
Psychological Test Battery to Detect Faked Insanity	undetermine	undetermin	undetermine	undeterm	undetermined
Structured Interview of Reported Symptoms	undetermine	undetermin	undetermine	undeterm	undetermined

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Ease of administration	Cost	Time Requirements	Generalizability Language
Myers-Briggs Type Indicator	*		*	
NEO Personality Inventory-Revised (NEO PI-R)	*	-	*	
Personality Assessment Inventory (PAI)	*		*	
Personality Diagnostic Questionnaire-Revised	+*		*	
Scale for the Assessment of Negative Symptoms				
Scale for the Assessment of Positive Symptoms				
Schedule for Nonadaptive and Adaptive Personality (SNAP)	*	-	-*	-
Symptom Questionnaire				
K. Eating Disorders				
Energy Expenditure	undetermined	undeterm	undetermined	undetermined
L. Activity/Sleep Disorders				
Motility Detection	undetermined	undeterm	undetermined	undetermined
Sleep Detection	undetermined	undeterm	undetermined	undetermined
M. Drug and Substance Abuse				
Alcohol Use Inventory	-*	-		-
McMullen Addiction Thought Scale	undetermined	undeterm	undetermined	undetermined
Michigan Alcoholism Screening Test	+*	*	*	undetermined
N. Stress				
Index of Clinical Stress	undetermined	undeterm	undetermined	undetermined
Self-Control Schedule	undetermined	undeterm	undetermined	undetermined
O. Other				
Medical Outcomes Study (MOS) General Health Survey	undetermined	undeterm	undetermined	undetermined
Psychological Test Battery to Detect Faked Insanity	undetermined	undeterm	undetermined	undetermined
Structured Interview of Reported Symptoms	undetermined	undeterm	undetermined	undetermined

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Disability	Computer	Verification of Effort
Myers-Briggs Type Indicator			
NEO Personality Inventory-Revised (NEO PI-R)		+*	
Personality Assessment Inventory (PAI)		+*	
Personality Diagnostic Questionnaire-Revised		+*	
Scale for the Assessment of Negative Symptoms			
Scale for the Assessment of Positive Symptoms			
Schedule for Nonadaptive and Adaptive Personality (SNAP)	-	+*	
Symptom Questionnaire			
K. Eating Disorders			
Energy Expenditure	undetermin	undetermin	undetermined
L. Activity/Sleep Disorders			
Motility Detection	undetermin	undetermin	undetermined
Sleep Detection	undetermin	undetermin	undetermined
M. Drug and Substance Abuse			
Alcohol Use Inventory	-	-	
McMullen Addiction Thought Scale	undetermin	undetermin	undetermined
Michigan Alcoholism Screening Test	ndetermine	ndetermine	*
N. Stress			
Index of Clinical Stress	undetermin	undetermin	undetermined
Self-Control Schedule	undetermin	undetermin	undetermined
O. Other			
Medical Outcomes Study (MOS) General Health Survey	undetermin	undetermin	undetermined
Psychological Test Battery to Detect Faked Insanity	undetermin	undetermin	undetermined
Structured Interview of Reported Symptoms	undetermin	undetermin	undetermined

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Instrument Purpose	Information Source	Primary Reason not Selected
IV. Health Status			
A. Global Measures of Health Status			
Sickness Impact Profile (SIP)			Not generalizable to SSA programs
Comprehensive Assessment and Referral Evaluation (CARE)	specific	pt	Specificity of functions
Dartmouth Primary Care Cooperative Information Project (COOP Chart	undetermined	undetermined	No research base
Frenchay Activities Index	undetermined	undetermined	No research base
Health Assessment Questionnaire Disability Index	general	pt	Absence of Reliability / Validity
Illness Behavior Scale	undetermined	undetermined	No research base
Major Health Problem Rating System	undetermined	undetermined	No research base
McMaster Health Index Questionnaire	general	pt	Absence of Reliability / Validity
Physical and Mental Impairment of Function Evaluation	undetermined	undetermined	No research base
Quality of Well-Being Scale	undetermined	undetermined	No research base
RAND Health Status Measures	undetermined	undetermined	No research base
Stanford Health Assessment Questionnaire	undetermined	undetermined	Not generalizable to SSA programs
B. Arthritis			
ARA Classification of Functional Capacity	-	interview(other)	Limited availability
Arthritis Impact Measurement Scale	specific	self	Specificity of functions
Assessment of Function	specific	self/interview	Specificity of functions
Functional Status Index (Jette)	-	self	Not generalizable to SSA programs
IFI Index of Functional Impairment	-	self/interview	Limited availability
Kietel Functional Test	-	observer	Limited availability
MHAQ & HAQ (Mis shorter)	-	self	Not generalizable to SSA programs
PI (Polyarthiticular Index) (Convery)	-	interview	Limited availability
Rheumatic Disease Self-Assessment	specific	self	Specificity of functions
C. Cancer			
Anamnestic Comparative Self-Assessment	specific	physician/self	Specificity of functions
Cancer Therapy Scale	-		Limited availability

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Reliability	Validity	Feasibility: Availability	Feasibility: Safety	Feasibility: Invasiveness
IV. Health Status					
A. Global Measures of Health Status					
Sickness Impact Profile (SIP)					
Comprehensive Assessment and Referral Evaluation (CARE)	not found	found	+*	-*	-*
Dartmouth Primary Care Cooperative Information Project (COOP Chart	not found	not found	undetermine	undeterm	undetermined
Frenchay Activities Index	not found	not found	undetermine	undeterm	undetermined
Health Assessment Questionnaire Disability Index	not found	not found	+*	-*	-*
Illness Behavior Scale	not found	not found	undetermine	undeterm	undetermined
Major Health Problem Rating System	not found	not found	undetermine	undeterm	undetermined
McMaster Health Index Questionnaire	not found	not found	+*	-*	-*
Physical and Mental Impairment of Function Evaluation	not found	not found	undetermine	undeterm	undetermined
Quality of Well-Being Scale	not found	not found	undetermine	undeterm	undetermined
RAND Health Status Measures	not found	not found	undetermine	undeterm	undetermined
Stanford Health Assessment Questionnaire	not found	not found	undetermine	undeterm	undetermined
B. Arthritis					
ARA Classification of Functional Capacity		X			
Arthritis Impact Measurement Scale	X	X	-	-	-
Assessment of Function	X	X	-	-	-
Functional Status Index (Jette)	X	X			
IFI Index of Functional Impairment	X	X	-	-	-
Kietel Functional Test	X	X	-	-	-
MHAQ & HAQ (Mis shorter)	X	X	-	-	-
PI (Polyarthiticular Index) (Convery)	X	X	-	-	-
Rheumatic Disease Self-Assessment	X	X	-	-	-
C. Cancer					
Anamnestic Comparative Self-Assessment	X	X	-	-	-
Cancer Therapy Scale	X	X	-	-	-

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Ease of administration	Cost	Time Requirements	Generalizability Language
IV. Health Status				
A. Global Measures of Health Status				
Sickness Impact Profile (SIP)				
Comprehensive Assessment and Referral Evaluation (CARE)	+*	-*	-*	undetermined
Dartmouth Primary Care Cooperative Information Project (COOP Chart	undetermined	undeterm	undetermined	undetermined
Frenchay Activities Index	undetermined	undeterm	undetermined	undetermined
Health Assessment Questionnaire Disability Index	+*	-*	-*	undetermined
Illness Behavior Scale	undetermined	undeterm	undetermined	undetermined
Major Health Problem Rating System	undetermined	undeterm	undetermined	undetermined
McMaster Health Index Questionnaire	+*	-*	-*	undetermined
Physical and Mental Impairment of Function Evaluation	undetermined	undeterm	undetermined	undetermined
Quality of Well-Being Scale	undetermined	undeterm	undetermined	undetermined
RAND Health Status Measures	undetermined	undeterm	undetermined	undetermined
Stanford Health Assessment Questionnaire	undetermined	undeterm	undetermined	undetermined
B. Arthritis				
ARA Classification of Functional Capacity			undetermined	
Arthritis Impact Measurement Scale	-	-	undetermined	-
Assessment of Function	-	-	undetermined	-
Functional Status Index (Jette)			undetermined	
IFI Index of Functional Impairment	-	-	undetermined	-
Kietel Functional Test	-	-	undetermined	-
MHAQ & HAQ (Mis shorter)	-	-	undetermined	-
PI (Polyarthiticular Index) (Convery)	-	-	undetermined	-
Rheumatic Disease Self-Assessment	-	-	undetermined	-
C. Cancer				
Anamnestic Comparative Self-Assessment	-	-	undetermined	-
Cancer Therapy Scale	-	-	undetermined	-

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category Instrument Name	Disability	Computer	Verification of Effort
IV. Health Status			
A. Global Measures of Health Status			
Sickness Impact Profile (SIP)			
Comprehensive Assessment and Referral Evaluation (CARE)	*	undetermine	*
Dartmouth Primary Care Cooperative Information Project (COOP Chart	undetermine	undetermine	undetermined
Frenchay Activities Index	undetermine	undetermine	undetermined
Health Assessment Questionnaire Disability Index	undetermine	undetermine	undetermined
Illness Behavior Scale	undetermine	undetermine	undetermined
Major Health Problem Rating System	undetermine	undetermine	undetermined
McMaster Health Index Questionnaire	undetermine	undetermine	undetermined
Physical and Mental Impairment of Function Evaluation	undetermin	undetermin	undetermined
Quality of Well-Being Scale	undetermin	undetermin	undetermined
RAND Health Status Measures	undetermin	undetermin	undetermined
Stanford Health Assessment Questionnaire	undetermin	undetermin	undetermined
B. Arthritis			
ARA Classification of Functional Capacity			undetermined
Arthritis Impact Measurement Scale	-	-	undetermined
Assessment of Function	-	-	undetermined
Functional Status Index (Jette)			undetermined
IFI Index of Functional Impairment	-	-	undetermined
Kietel Functional Test	-	-	undetermined
MHAQ & HAQ (Mis shorter)	-	-	undetermined
PI (Polyarthiticular Index) (Convery)	-	-	undetermined
Rheumatic Disease Self-Assessment	-	-	undetermined
C. Cancer			
Anamnestic Comparative Self-Assessment	-	-	undetermined
Cancer Therapy Scale	-	-	undetermined

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Instrument Purpose	Information Source	Primary Reason not Selected
Functional Living Index for Cancer (FLIC)	specific	self	Specificity of functions
Instrument for Assessing Quality of Life	specific	self	Specificity of functions
Karnofsky Performance Status (KPS)	specific	self	Specificity of functions
Linear Analogue Self-Assessment	specific	self	Specificity of functions
Quality of Life Index I,II	specific	physician,nurse	Specificity of functions
Quality of Life Multidimensional Approach	specific	self	Specificity of functions
Rotterdam Symptom Checklist	specific	self	Specificity of functions
Spitzer QL Index (QL1)	specific	physician/SW/n	Specificity of functions
Symptom Checklist for Cancer Patients	specific	self	Specificity of functions
D. Dementia/Alzheimer Disease			
Alzheimer Disease Assessment Scale (ADAS)	specific	doctor	Specificity of functions
Cognitive Scales for Dementia	undetermined	undetermined	No research base
Dementia Rating Scale (DRS)	specific	other	Specificity of functions
Mental Function Index	specific	individual	Specificity of functions
E. Epilepsy			
Structured Clinical Interview for Complex Partial Seizure-Like Symptoms	unknown	undetermined	Absence of Reliability / Validity
Washington Psychosocial Seizure Inventory (WPSI)	specific	other	Specificity of functions
F. Heart Disease			
Baseline Dyspnea Index	specific	other	Specificity of functions
Pulmonary Function Status and Dypsnea Questionnaire	specific	individual	Intrusive
Pulmonary Functional Status Scale	unknown	undetermined	Absence of Reliability / Validity
Seattle Angina Questionnaire	specific	self-report	Specificity of functions
G. Respiratory Disease			
Chronic Respiratory Disease Questionnaire	specific	other	Specificity of functions
UAB Functional Impairment Scale	specific	other	Specificity of functions

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Reliability	Validity	Feasibility: Availability	Feasibility: Safety	Feasibility: Invasiveness
Functional Living Index for Cancer (FLIC)	X	X	-	-	-
Instrument for Assessing Quality of Life	X	X	-	-	-
Karnofsky Performance Status (KPS)	X	X	*	-	-
Linear Analogue Self-Assessment	X	X	-	-	-
Quality of Life Index I,II	X	X	-	-	-
Quality of Life Multidimensional Approach	X	X	-	-	-
Rotterdam Symptom Checklist	X	X	-	-	-
Spitzer QL Index (QL1)	X	X	-	-	-
Symptom Checklist for Cancer Patients	X	X	-	-	-
D. Dementia/Alzheimer Disease					
Alzheimer Disease Assessment Scale (ADAS)	not found	not found	+*	+*	undetermined
Cognitive Scales for Dementia	not found	not found	undetermine	ndetermin	undetermined
Dementia Rating Scale (DRS)	not found	found	+*	+*	undetermined
Mental Function Index	X	X	-	+*	-*
E. Epilepsy					
Structured Clinical Interview for Complex Partial Seizure-Like Symptoms	not found	not found	undetermine	ndetermin	undetermined
Washington Psychosocial Seizure Inventory (WPSI)	found	found	+*	ndetermin	undetermined
F. Heart Disease					
Baseline Dyspnea Index	found	found	undetermine	ndetermin	undetermined
Pulmonary Function Status and Dypsnea Questionnaire	X	X	-	+*	+*
Pulmonary Functional Status Scale	not found	not found	undetermine	ndetermin	undetermined
Seattle Angina Questionnaire	found	found	+*	+*	undetermined
G. Respiratory Disease					
Chronic Respiratory Disease Questionnaire	found	found	+*	ndetermin	undetermined
UAB Functional Impairment Scale	found	found	+*	ndetermin	undetermined

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Ease of administration	Cost	Time Requirements	Generalizability Language
Functional Living Index for Cancer (FLIC)	-	-	undetermined	-
Instrument for Assessing Quality of Life	-	-	undetermined	-
Karnofsky Performance Status (KPS)	-	-	undetermined	-
Linear Analogue Self-Assessment	-	-	undetermined	-
Quality of Life Index I,II	-	-	undetermined	-
Quality of Life Multidimensional Approach	-	-	undetermined	-
Rotterdam Symptom Checklist	-	-	undetermined	-
Spitzer QL Index (QL1)	-	-	undetermined	-
Symptom Checklist for Cancer Patients	-	-	undetermined	-
D. Dementia/Alzheimer Disease				
Alzheimer Disease Assessment Scale (ADAS)	+*	ndetermin	30 min	undetermined
Cognitive Scales for Dementia	undetermined	ndetermin	undetermined	undetermined
Dementia Rating Scale (DRS)	undetermined	ndetermin	30 min	undetermined
Mental Function Index	-*	-	undetermined	-
E. Epilepsy				
Structured Clinical Interview for Complex Partial Seizure-Like Symptoms	undetermined	ndetermin	undetermined	undetermined
Washington Psychosocial Seizure Inventory (WPSI)	undetermined	ndetermin	undetermined	Chile/Japan/Canad
F. Heart Disease				
Baseline Dyspnea Index	undetermined	ndetermin	undetermined	undetermined
Pulmonary Function Status and Dypsnea Questionnaire	-*	-	undetermined	-
Pulmonary Functional Status Scale	undetermined	ndetermin	undetermined	undetermined
Seattle Angina Questionnaire	+*	ndetermin	undetermined	undetermined
G. Respiratory Disease				
Chronic Respiratory Disease Questionnaire	undetermined	ndetermin	undetermined	undetermined
UAB Functional Impairment Scale	undetermined	ndetermin	undetermined	undetermined

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Disability	Computer	Verification of Effort
Functional Living Index for Cancer (FLIC)	-	-	undetermined
Instrument for Assessing Quality of Life	-	-	undetermined
Karnofsky Performance Status (KPS)	-	-	undetermined
Linear Analogue Self-Assessment	-	-	undetermined
Quality of Life Index I,II	-	-	undetermined
Quality of Life Multidimensional Approach	-	-	undetermined
Rotterdam Symptom Checklist	-	-	undetermined
Spitzer QL Index (QL1)	-	-	undetermined
Symptom Checklist for Cancer Patients	-	-	undetermined
D. Dementia/Alzheimer Disease			
Alzheimer Disease Assessment Scale (ADAS)	ndetermine	ndetermine	undetermined
Cognitive Scales for Dementia	ndetermine	ndetermine	undetermined
Dementia Rating Scale (DRS)	ndetermine	ndetermine	undetermined
Mental Function Index	-	-	undetermined
E. Epilepsy			
Structured Clinical Interview for Complex Partial Seizure-Like Symptoms	ndetermine	ndetermine	undetermined
Washington Psychosocial Seizure Inventory (WPSI)	ndetermine	ndetermine	undetermined
F. Heart Disease			
Baseline Dyspnea Index	ndetermine	ndetermine	undetermined
Pulmonary Function Status and Dypsnea Questionnaire	-	-	undetermined
Pulmonary Functional Status Scale	ndetermine	ndetermine	undetermined
Seattle Angina Questionnaire	ndetermine	ndetermine	undetermined
G. Respiratory Disease			
Chronic Respiratory Disease Questionnaire	ndetermine	ndetermine	undetermined
UAB Functional Impairment Scale	ndetermine	ndetermine	undetermined

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Instrument Purpose	Information Source	Primary Reason not Selected
L. Other Chronic Diseases and Conditions			
Diabetes QOL			Not generalizable to SSA programs
Functional Capacity Areas	unknown	undetermined	Absence of Reliability / Validity
NIH Stroke Scale	specific	undetermined	Specificity of functions
Parkinson's Disease Question			Not generalizable to SSA programs
Unified Parkinson's Disease Rating Scale	specific	individual	Intrusive
V. Measures of Self-Care, Activities of Daily Living (ADLs)			
Adaptive Behavior Scale	general	other	Other
ASK	general	individual	Intrusive
Cleveland Scale for ADL			Not generalizable to SSA programs
Daily Living Questionnaire	unknown	undetermined	Absence of Reliability / Validity
Disability Distress Index	unknown	undetermined	Absence of Reliability / Validity
Disability Index	unknown	undetermined	Absence of Reliability / Validity
Duke Activity Status Index	specific	individual	Intrusive
Frenchay Activities Index	general	family & patient	Intrusive
Functional Assessment Measure (FAM)	specific	undetermined	Specificity of functions
Functional Life Scale	unknown	undetermined	Absence of Reliability / Validity
Functional Performance Measure	unknown	undetermined	Absence of Reliability / Validity
Functional Status Index (FSI)	specific	individual	Intrusive
Functional Status Rating System	general	staff	Limited availability
Health Status Questionnaire Disability Index (HSQ)	unknown	undetermined	Absence of Reliability / Validity
Individual Functional Assessment	unknown	undetermined	Absence of Reliability / Validity
Instrumental Activities of Daily Living (IADLs)	unknown	undetermined	Absence of Reliability / Validity
Karnofsky Activity Scale	general	other	Not generalizable to SSA programs
Klein-Bell ADL Scale	unknown	undetermined	Absence of Reliability / Validity
Lawton Instrumental Activities of Daily Living Scale	unknown	undetermined	Absence of Reliability / Validity
PGC Instrument Activities of Daily Living	general	undetermined	Not generalizable to SSA programs
Physical Self-Maintenance Scale	specific	staff	Specificity of functions
Resource Associated Functional Level Scale - Revised	unknown	undetermined	Absence of Reliability / Validity
Vineland Adaptive Behavior Scale	general	other	Not generalizable to SSA programs
Winchester Disability Rating Scale - 2	specific	other	Specificity of functions

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Reliability	Validity	Feasibility		
			Availability	Safety	Invasiveness
L. Other Chronic Diseases and Conditions					
Diabetes QOL					
Functional Capacity Areas	not found	not found	undetermine	undeterm	undetermined
NIH Stroke Scale	X	X	*	*	*
Parkinson's Disease Question					
Unified Parkinson's Disease Rating Scale	X	X	-	+*	+*
V. Measures of Self-Care, Activities of Daily Living (ADLs)					
Adaptive Behavior Scale	found	found	+*	undeterm	undetermined
ASK	X	X	-	+*	+*
Cleveland Scale for ADL					
Daily Living Questionnaire	not found	not found	undetermine	ndetermin	undetermined
Disability Distress Index	not found	not found	undetermine	ndetermin	undetermined
Disability Index	not found	not found	undetermine	ndetermin	undetermined
Duke Activity Status Index	X	X	-	+*	+*
Frenchay Activities Index	X	X	*	+*	+*
Functional Assessment Measure (FAM)	X	not found	undetermine	ndetermin	undetermined
Functional Life Scale	not found	not found	undetermine	ndetermin	undetermined
Functional Performance Measure	not found	not found	undetermine	ndetermin	undetermined
Functional Status Index (FSI)	X	X	-	+*	+*
Functional Status Rating System	X		undetermine	ndetermin	undetermined
Health Status Questionnaire Disability Index (HSQ)	not found	not found	undetermine	ndetermin	undetermined
Individual Functional Assessment	not found	not found	undetermine	ndetermin	undetermined
Instrumental Activities of Daily Living (IADLs)	not found	not found	undetermine	ndetermin	undetermined
Karnofsky Activity Scale	found	found	undetermine	ndetermin	undetermined
Klein-Bell ADL Scale	not found	not found	undetermine	ndetermin	undetermined
Lawton Instrumental Activities of Daily Living Scale	not found	not found	undetermine	ndetermin	undetermined
PGC Instrument Activities of Daily Living	X	X	*	*	*
Physical Self-Maintenance Scale	X	X	undetermine	ndetermin	undetermined
Resource Associated Functional Level Scale - Revised	not found	not found	undetermine	ndetermin	undetermined
Vineland Adaptive Behavior Scale	found	found	+*	ndetermin	undetermined
Winchester Disability Rating Scale - 2	found	found	undetermine	ndetermin	undetermined

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Ease of administration	Cost	Time Requirements	Generalizability Language
L. Other Chronic Diseases and Conditions				
Diabetes QOL				
Functional Capacity Areas	undetermined	undeterm	undetermined	undetermined
NIH Stroke Scale	+*	-	undetermined	-
Parkinson's Disease Question				
Unified Parkinson's Disease Rating Scale	-*	-	undetermined	-
V. Measures of Self-Care, Activities of Daily Living (ADLs)				
Adaptive Behavior Scale	undetermined	undeterm	undetermined	undetermined
ASK	-*	-		-
Cleveland Scale for ADL				
Daily Living Questionnaire	undetermined	ndetermin	undetermined	undetermined
Disability Distress Index	undetermined	ndetermin	undetermined	undetermined
Disability Index	undetermined	ndetermin	undetermined	undetermined
Duke Activity Status Index	-*	-	undetermined	-
Frenchay Activities Index	+*	-	undetermined	-
Functional Assessment Measure (FAM)	undetermined	ndetermin	undetermined	undetermined
Functional Life Scale	undetermined	ndetermin	undetermined	undetermined
Functional Performance Measure	undetermined	ndetermin	undetermined	undetermined
Functional Status Index (FSI)	+*	-	undetermined	-
Functional Status Rating System	undetermined	ndetermin	undetermined	undetermined
Health Status Questionnaire Disability Index (HSQ)	undetermined	ndetermin	undetermined	undetermined
Individual Functional Assessment	undetermined	ndetermin	undetermined	undetermined
Instrumental Activities of Daily Living (IADLs)	undetermined	ndetermin	undetermined	undetermined
Karnofsky Activity Scale	undetermined	ndetermin	undetermined	undetermined
Klein-Bell ADL Scale	undetermined	ndetermin	undetermined	undetermined
Lawton Instrumental Activities of Daily Living Scale	undetermined	ndetermin	undetermined	undetermined
PGC Instrument Activities of Daily Living	*	-	undetermined	-
Physical Self-Maintenance Scale	undetermined	ndetermin	undetermined	undetermined
Resource Associated Functional Level Scale - Revised	undetermined	ndetermin	undetermined	undetermined
Vineland Adaptive Behavior Scale	undetermined	ndetermin	undetermined	undetermined
Winchester Disability Rating Scale - 2	undetermined	ndetermin	undetermined	undetermined

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Disability	Computer	Verification of Effort
L. Other Chronic Diseases and Conditions			
Diabetes QOL			
Functional Capacity Areas	undetermin	undetermin	undetermined
NIH Stroke Scale	-	-	undetermined
Parkinson's Disease Question			
Unified Parkinson's Disease Rating Scale	-	-	undetermined
V. Measures of Self-Care, Activities of Daily Living (ADLs)			
Adaptive Behavior Scale	undetermin	undetermin	undetermined
ASK	-	-	
Cleveland Scale for ADL			
Daily Living Questionnaire	ndetermine	ndetermine	undetermined
Disability Distress Index	ndetermine	ndetermine	undetermined
Disability Index	ndetermine	ndetermine	undetermined
Duke Activity Status Index	-	-	undetermined
Frenchay Activities Index	-	-	undetermined
Functional Assessment Measure (FAM)	ndetermine	ndetermine	undetermined
Functional Life Scale	ndetermine	ndetermine	undetermined
Functional Performance Measure	ndetermine	ndetermine	undetermined
Functional Status Index (FSI)	-	-	undetermined
Functional Status Rating System	ndetermine	ndetermine	undetermined
Health Status Questionnaire Disability Index (HSQ)	ndetermine	ndetermine	undetermined
Individual Functional Assessment	ndetermine	ndetermine	undetermined
Instrumental Activities of Daily Living (IADLs)	ndetermine	ndetermine	undetermined
Karnofsky Activity Scale	ndetermine	ndetermine	undetermined
Klein-Bell ADL Scale	ndetermine	ndetermine	undetermined
Lawton Instrumental Activities of Daily Living Scale	ndetermine	ndetermine	undetermined
PGC Instrument Activities of Daily Living	-	-	undetermined
Physical Self-Maintenance Scale	ndetermine	ndetermine	undetermined
Resource Associated Functional Level Scale - Revised	ndetermine	ndetermine	undetermined
Vineland Adaptive Behavior Scale	ndetermine	ndetermine	undetermined
Winchester Disability Rating Scale - 2	ndetermine	ndetermine	undetermined

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Instrument Purpose	Information Source	Primary Reason not Selected
A. Quality of Life/Life Satisfaction			
Lehman Quality of Life Interview	specific	other	Specificity of functions
Life Satisfaction Index	general	other	Not generalizable to SSA programs
Quality of Life Index	unknown	undetermined	Absence of Reliability / Validity
B. Social Health			
Community Integration Questionnaire	specific	individual	Intrusive
Groningen Social Disability Schedule Self-Report	general	individual/interv	Not generalizable to SSA programs
Interview Schedule for Social Interaction	general	other	Not generalizable to SSA programs
Major Role Adjustment Inventory	unknown	undetermined	Absence of Reliability / Validity
MRC Social Role Performance Schedule	unknown	undetermined	Absence of Reliability / Validity
Older-American Resource Scale, Multidimensional Functional Assessme	specific	individual	Specificity of functions
Rating of Social Disability	unknown	undetermined	Absence of Reliability / Validity
Social Dysfunction and Aggression Scale	general	other	Not generalizable to SSA programs
Social Dysfunction Rating Scale	general	other	Not generalizable to SSA programs
Social Functioning Schedule	specific		Specificity of functions
Social Health Battery	general	self-report	Not generalizable to SSA programs
Social Interview Schedule	specific	individual	Specificity of functions
Social Performance Schedule	general	individual	Not generalizable to SSA programs
Social Readjustment Rating Schedule	general	individual	Not generalizable to SSA programs
Social Support Questionnaire	general	individual	Intrusive
C. Other			
Vermont Community Questionnaire	unknown	undetermined	Absence of Reliability / Validity
Work Problem Interview Guide	unknown	undetermined	Absence of Reliability / Validity

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Reliability	Validity	Feasibility: Availability	Safety	Invasiveness
A. Quality of Life/Life Satisfaction					
Lehman Quality of Life Interview	found	found	undetermine	ndetermin	undetermined
Life Satisfaction Index	found	found	+*	ndetermin	undetermined
Quality of Life Index	not found	not found	undetermine	ndetermin	undetermined
B. Social Health					
Community Integration Questionnaire	X	X	-	+*	+*
Groningen Social Disability Schedule Self-Report	X	X	-	*	*
Interview Schedule for Social Interaction	X	X	undetermine	ndetermin	undetermined
Major Role Adjustment Inventory	not found	not found	undetermine	ndetermin	undetermined
MRC Social Role Performance Schedule	not found	not found	undetermine	ndetermin	undetermined
Older-American Resource Scale, Multidimensional Functional Assessme	X	X	*	*	-
Rating of Social Disability	not found	not found	undetermine	ndetermin	undetermined
Social Dysfunction and Aggression Scale	found	found	+*	+*	undetermined
Social Dysfunction Rating Scale	X	X	undetermine	ndetermin	undetermined
Social Functioning Schedule	X	X	undetermine	ndetermin	undetermined
Social Health Battery		X	undetermine	ndetermin	undetermined
Social Interview Schedule	X	X	-	+*	-*
Social Performance Schedule	X	X	*	*	-
Social Readjustment Rating Schedule	X	X	*	*	*
Social Support Questionnaire	X	X	-	+*	+*
C. Other					
Vermont Community Questionnaire	not found	not found	undetermine	ndetermin	undetermined
Work Problem Interview Guide	not found	not found	undetermine	ndetermin	undetermined

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Ease of administration	Cost	Time Requirements	Generalizability Language
A. Quality of Life/Life Satisfaction				
Lehman Quality of Life Interview	undetermined	ndetermin	undetermined	undetermined
Life Satisfaction Index	undetermined	ndetermin	undetermined	Castihan/Spanish
Quality of Life Index	undetermined	ndetermin	undetermined	undetermined
B. Social Health				
Community Integration Questionnaire	-*	-	undetermined	-
Groningen Social Disability Schedule Self-Report	*	-	undetermined	*
Interview Schedule for Social Interaction	undetermined	ndetermin	undetermined	undetermined
Major Role Adjustment Inventory	undetermined	ndetermin	undetermined	undetermined
MRC Social Role Performance Schedule	undetermined	ndetermin	undetermined	undetermined
Older-American Resource Scale, Multidimensional Functional Assessme	*	-	undetermined	-
Rating of Social Disability	undetermined	ndetermin	undetermined	undetermined
Social Dysfunction and Aggression Scale	undetermined	ndetermin	undetermined	Denmark/Sweden
Social Dysfunction Rating Scale	undetermined	ndetermin	undetermined	undetermined
Social Functioning Schedule	undetermined	ndetermin	undetermined	undetermined
Social Health Battery	undetermined	ndetermin	undetermined	undetermined
Social Interview Schedule	-*	-	undetermined	-
Social Performance Schedule	*	-	undetermined	-
Social Readjustment Rating Schedule	*	-	undetermined	S.Africa/China
Social Support Questionnaire	-*	-	undetermined	-
C. Other				
Vermont Community Questionnaire	undetermined	ndetermin	undetermined	undetermined
Work Problem Interview Guide	undetermined	ndetermin	undetermined	undetermined

Functional Assessment Instruments and Methods

Not Selected for Further Review
by Unit of Analysis

Instrument Category / Instrument Name	Disability	Computer	Verification of Effort
A. Quality of Life/Life Satisfaction			
Lehman Quality of Life Interview	indetermine	indetermine	undetermined
Life Satisfaction Index	indetermine	indetermine	undetermined
Quality of Life Index	indetermine	indetermine	undetermined
B. Social Health			
Community Integration Questionnaire	-	-	undetermined
Groningen Social Disability Schedule Self-Report	-	-	undetermined
Interview Schedule for Social Interaction	indetermine	indetermine	undetermined
Major Role Adjustment Inventory	indetermine	indetermine	undetermined
MRC Social Role Performance Schedule	indetermine	indetermine	undetermined
Older-American Resource Scale, Multidimensional Functional Assessme	-	-	undetermined
Rating of Social Disability	indetermine	indetermine	undetermined
Social Dysfunction and Aggression Scale	indetermine	indetermine	undetermined
Social Dysfunction Rating Scale	indetermine	indetermine	undetermined
Social Functioning Schedule	indetermine	indetermine	undetermined
Social Health Battery	indetermine	indetermine	undetermined
Social Interview Schedule	-	-	undetermined
Social Performance Schedule	-	-	undetermined
Social Readjustment Rating Schedule	-	-	undetermined
Social Support Questionnaire	-	-	undetermined
C. Other			
Vermont Community Questionnaire	indetermine	indetermine	undetermined
Work Problem Interview Guide	indetermine	indetermine	undetermined